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Ala Gly Ser Ser Leu Ile His Gly Gln Asp Ala Gln Pro Val Lys Ala
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 Arg Gln Cys Glu Asp Leu Val Lys Leu Lys Ile Arg Lys Asp Glu Asp
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 Pro His Ala Trp Lys Tyr Ile Ala Tyr Val Val Ser Phe Ser Ser Trp
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His Gly Leu Ser Gly Arg Gly Ser Trp Arg Thr Leu Arg Trp Thr Trp
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                                     90
Leu Trp Gly Leu Gly His Gly Cys Pro Val Ala Pro Val Thr Cys Pro
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Gly Pro Asp Tyr Val Pro Arg Ala Cys Arg Trp Ala Gln Trp Pro Leu
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Met Ile Asn Gln Ile Gln Asp Asp Thr Gly Ala Asn Ile Ser Ile Glu
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Asp Asp Gly Thr Ile Phe Ile Gly Ala Asp Asn Gly Asp Ser Ala Glu
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Ser Ala Arg Ser Met Ile Asn Ala Ile Ala Asn Pro Gln Met Pro Glu
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Val Gly Glu Arg Tyr Leu Gly Thr Val Val Lys Thr Thr Ser Phe Gly
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Phe Ser Arg Cys Asp Leu Arg Val Asn Lys Cys Gly Ala Gln Arg Val
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Ser Ala Pro Leu Lys Ser Ser Ala Val Ser Phe Gln Leu Gln Leu Gln
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Leu Gln Glu Ala Val Gln Glu Cys Ala Asp Pro Gly Val Pro Ser Gly
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ttagttaact gaatttggaa tgttcatata aataatttgt tgctgctc
8028
<210> 2030
<211> 794
<212> PRT
<213> Homo sapiens
<400> 2030
Met Arg Val Arg Ile Gly Leu Thr Leu Leu Leu Cys Ala Val Leu Leu
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Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp Glu Ser
           20
                               25
Leu Asp Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val Lys Asp His
Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe Leu Asp Ser Glu
Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu Asp Ser Leu Lys
                   70
Ser Gln Glu Gly Glu Ser Val Thr Glu Asp Ile Ser Phe Leu Glu Ser
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90
Pro Asn Pro Glu Asn Lys Asp Tyr Glu Glu Pro Lys Lys Val Arg Lys
                               105
           100
Pro Ala Leu Thr Ala Ile Glu Gly Thr Ala His Gly Glu Pro Cys His
                           120
Phe Pro Phe Leu Phe Leu Asp Lys Glu Tyr Asp Glu Cys Thr Ser Asp
                      135
Gly Arg Glu Asp Gly Arg Leu Trp Cys Ala Thr Thr Tyr Asp Tyr Lys
                                       155
                  150
Ala Asp Glu Lys Trp Gly Phe Cys Glu Thr Glu Glu Glu Ala Ala Lys
                                   170
               165
Arg Arg Gln Met Gln Glu Ala Glu Met Met Tyr Gln Thr Gly Met Lys
                              185
Ile Leu Asn Gly Ser Asn Lys Lys Ser Gln Lys Arg Glu Ala Tyr Arg
                           200
Tyr Leu Gln Lys Ala Ala Ser Met Asn His Thr Lys Ala Leu Glu Arg
                                           220
                       215
Val Ser Tyr Ala Leu Leu Phe Gly Asp Tyr Leu Pro Gln Asn Ile Gln
                   230
Ala Ala Arg Glu Met Phe Glu Lys Leu Thr Glu Glu Gly Ser Pro Lys
                                   250
Gly Gln Thr Ala Leu Gly Phe Leu Tyr Ala Ser Gly Leu Gly Val Asn
                     265
Ser Ser Gln Ala Lys Ala Leu Val Tyr Tyr Thr Phe Gly Ala Leu Gly
                           280
Gly Asn Leu Ile Ala His Met Val Leu Gly Tyr Arg Tyr Trp Ala Gly
                       295
                                           300
Ile Gly Val Leu Gln Ser Cys Glu Ser Ala Leu Thr His Tyr Arg Leu
                                       315
                  310
Val Ala Asn His Val Ala Ser Asp Ile Ser Leu Thr Gly Gly Ser Val
                                   330
               325
Val Gln Arg Ile Arg Leu Pro Asp Glu Val Glu Asn Pro Gly Met Asn
                               345
Ser Gly Met Leu Glu Glu Asp Leu Ile Gln Tyr Tyr Gln Phe Leu Ala
                           360
Glu Lys Gly Asp Val Gln Ala Gln Val Gly Leu Gly Gln Leu His Leu
                                            380
                       375
His Gly Gly Arg Gly Val Glu Gln Asn His Gln Arg Ala Phe Asp Tyr
                                       395
                   390
Phe Asn Leu Ala Ala Asn Ala Gly Asn Ser His Ala Met Ala Phe Leu
                                   410
Gly Lys Met Tyr Ser Glu Gly Ser Asp Ile Val Pro Gln Ser Asn Glu
                               425
           420
Thr Ala Leu His Tyr Phe Lys Lys Ala Ala Asp Met Gly Asn Pro Val
                           440
                                                445
Gly Gln Ser Gly Leu Gly Met Ala Tyr Leu Tyr Gly Arg Gly Val Gln
                       455
Val Asn Tyr Asp Leu Ala Leu Lys Tyr Phe Gln Lys Ala Ala Glu Gln
                   470
                                       475
Gly Trp Val Asp Gly Gln Leu Gln Leu Gly Ser Met Tyr Tyr Asn Gly
                                    490
               485
Ile Gly Val Lys Arg Asp Tyr Lys Gln Ala Leu Lys Tyr Phe Asn Leu
                               505
Ala Ser Gln Gly Gly His Ile Leu Ala Phe Tyr Asn Leu Ala Gln Met
```

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515
                              520
                                                  525
 His Ala Ser Gly Thr Gly Val Met Arg Ser Cys His Thr Ala Val Glu
                          535
                                              540
 Leu Phe Lys Asn Val Cys Glu Arg Gly Arg Trp Ser Glu Arg Leu Met
                                          555
 Thr Ala Tyr Asn Ser Tyr Lys Asp Gly Asp Tyr Asn Ala Ala Val Ile
                 565
                                      570
 Gln Tyr Leu Leu Leu Ala Glu Gln Gly Tyr Glu Val Ala Gln Ser Asn
             580
                                  585
 Ala Ala Phe Ile Leu Asp Gln Arg Glu Ala Ser Ile Val Gly Glu Asn
                             600
 Glu Thr Tyr Pro Arg Ala Leu Leu His Trp Asn Arg Ala Ala Ser Gln
                         615
                                             620
 Gly Tyr Thr Val Ala Arg Ile Lys Leu Gly Asp Tyr His Phe Tyr Gly
                     630
                                         635
 Phe Gly Thr Asp Val Asp Tyr Glu Thr Ala Phe Ile His Tyr Arg Leu
                                     650
 Ala Ser Glu Gln Gln His Ser Ala Gln Ala Met Phe Asn Leu Gly Tyr
                                 665
 Met His Glu Lys Gly Leu Gly Ile Lys Gln Asp Ile His Leu Ala Lys
 Arg Phe Tyr Asp Met Ala Ala Glu Ala Ser Pro Asp Ala Gln Val Pro
                         695
                                             700
 Val Phe Leu Ala Leu Cys Lys Leu Gly Val Val Tyr Phe Leu Gln Tyr
                     710
                                         715
Ile Arg Glu Thr Asn Ile Arg Asp Met Phe Thr Gln Leu Asp Met Asp
                 725
                                     730
Gln Leu Leu Gly Pro Glu Trp Asp Leu Tyr Leu Met Thr Ile Ile Ala
                                 745
                                                     750
Leu Leu Gly Thr Val Ile Ala Tyr Arg Gln Arg Gln His Gln Asp
                                                 765
Met Pro Ala Pro Arg Pro Pro Gly Pro Arg Pro Ala Pro Pro Gln Gln
                         775
Glu Gly Pro Pro Glu Gln Gln Pro Pro Gln
                     790
<210> 2031
<211> 662
<212> DNA
<213> Homo sapiens
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atcagecaat ggeaggegge teacceggeg gatcagatea cegtgegtga egtggegetg
aaccccgtgc cgcacctgga cacgcatctg ctcggcggct ggatgaaacc tgccgaacag
cgcagcgcga tcgaacaggc ttccctggac cgctccaatc aattgaccga cgaattgctc
geogeogaeg tgetggtgat ggetgeaceg atgtacaact tegetatece cageacecte
aaagcctggc tggaccacgt gttgcgtgcc ggtgtgacct tcaagtacac cgccaccggc
```

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ccccagggat tgctgcacgg caagcgcgcg attgtgctga ccgctcgcgg cggcattcat
420
accggcgcca gctccgatca ccaggaaccg tacctgcgcc aggtcatggc ctttatcggg
attcatgacg tcacgttcat tcatgccgaa ggggtgaact tgagcggtga cttccaggaa
aaaggeetta accaegeeaa ggegttgetg gegeaacttg tggeatgaac egagteaaeg
gttaatcgtc acataatcgc cgggtgttta tatcgcttca cgcaaaccct tcaagtacgc
660
gt
662
<210> 2032
<211> 195
<212> PRT
<213> Homo sapiens
<400> 2032
Ile Ile Glu Ser Ser Ala Arg Gln Gln Asp Ser Ile Ser Arg Gln Leu
Thr Gln Gln Phe Ile Ser Gln Trp Gln Ala Ala His Pro Ala Asp Gln
Ile Thr Val Arg Asp Val Ala Leu Asn Pro Val Pro His Leu Asp Thr
His Leu Leu Gly Gly Trp Met Lys Pro Ala Glu Gln Arg Ser Ala Ile
                                            60
Glu Gln Ala Ser Leu Asp Arg Ser Asn Gln Leu Thr Asp Glu Leu Leu
                                        75
Ala Ala Asp Val Leu Val Met Ala Ala Pro Met Tyr Asn Phe Ala Ile
                                    90
Pro Ser Thr Leu Lys Ala Trp Leu Asp His Val Leu Arg Ala Gly Val
                                105
           100
Thr Phe Lys Tyr Thr Ala Thr Gly Pro Gln Gly Leu Leu His Gly Lys
                           120
Arg Ala Ile Val Leu Thr Ala Arg Gly Gly Ile His Thr Gly Ala Ser
                        135
Ser Asp His Gln Glu Pro Tyr Leu Arg Gln Val Met Ala Phe Ile Gly
                    150
                                        155
Ile His Asp Val Thr Phe Ile His Ala Glu Gly Val Asn Leu Ser Gly
                                    170
Asp Phe Gln Glu Lys Gly Leu Asn His Ala Lys Ala Leu Leu Ala Gln
                                185
Leu Val Ala
        195
<210> 2033
<211> 380
<212> DNA
<213> Homo sapiens
<400> 2033
aaattttaaa acggtcatca tttaacaggc gaagctgtaa aacgcagtct tgaagaggga
60
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atgaaaaaa gtgatttgtt aaaaggatca cttcctatca aatcaatcaa cgctcatgga
 caaaaagtca caatcaatac taaagaacct tatccagaat taaagtctga actcgcaagc
 ccatttgctg ctatatacga cacaaaagct aaaaacaaag taactgatca acctgttggt
 acgggtcctt atcaaattga cagttataaa cgttcgcaaa aaatcgtatt aaaacaattc
 300
 aaagactact ggcaaggtac gccaaaatta aaaagaatta atgtcactta tcatgaagat
 ggtaatantc .gtgttgatca
 380
 <210> 2034
 <211> 106
 <212> PRT
 <213> Homo sapiens
 <400> 2034
Met Lys Lys Ser Asp Leu Leu Lys Gly Ser Leu Pro Ile Lys Ser Ile
 1
                                 10
Asn Ala His Gly Gln Lys Val Thr Ile Asn Thr Lys Glu Pro Tyr Pro
                              25
Glu Leu Lys Ser Glu Leu Ala Ser Pro Phe Ala Ala Ile Tyr Asp Thr
                          40
Lys Ala Lys Asn Lys Val Thr Asp Gln Pro Val Gly Thr Gly Pro Tyr
                      55
Gln Ile Asp Ser Tyr Lys Arg Ser Gln Lys Ile Val Leu Lys Gln Phe
                  70
                                     75
Lys Asp Tyr Trp Gln Gly Thr Pro Lys Leu Lys Arg Ile Asn Val Thr
              85
Tyr His Glu Asp Gly Asn Xaa Arg Val Asp
           100
<210> 2035
<211> 495
<212> DNA
<213> Homo sapiens
<400> 2035
ngaatteett taetgettge aacacaggee caagetaete geagecatga taetteetgt
60
tatgetntaa tgtteecett teatetegea tgteteeaet tetgetgeta ttgetgttae
180
ttgtgtgttg gtgcacctaa tggtgtccca tatttctctg atgctgtgtt catttttctt
gattettet actgretggt etteagttig cataateeat attgretetet etactagtte
300
actggtgctt ttgcctgcca gctctaattt actgttatcc cctttagtga aattttttct
420
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tttgttttgt tttgttttga gaccccatct caaaaaaaaa aaaaaccagc tttctcctca
480
acttggggga acctt
495
<210> 2036
<211> 98
<212> PRT
<213> Homo sapiens
<400> 2036
Xaa Ile Pro Leu Leu Leu Ala Thr Gln Ala Gln Ala Thr Arg Ser His
                                    10
Asp Thr Ser Cys Leu His Phe Phe His Val Cys Met Tyr Val Cys Met
            20
Tyr Val Cys Met Tyr Val Cys Met Tyr Ala Xaa Met Phe Pro Phe His
                                                 45
                            40
Leu Ala Cys Leu His Phe Cys Cys Tyr Cys Cys Tyr Leu Cys Val Gly
                                             60
Ala Pro Asn Gly Val Pro Tyr Phe Ser Asp Ala Val Phe Ile Phe Leu
                                         75
                    70
Asp Ser Phe Tyr Cys Leu Val Phe Ser Leu His Asn Pro Tyr Cys Ser
                85
                                     90
Leu Tyr
<210> 2037
<211> 327
<212> DNA
<213> Homo sapiens
<400> 2037
acgcgtgaag ggaaggggga gaccccggca gaaatggaga aatgggggcg cacacagacg
ggaagagtga ggttggagtg cctttcccgc gctcatcttc cgtccccact ccacgcccag
120
caaatccaaa caccgcggcc tctggtggcc cgggcttcca tttcccctgg aggggcaagg
gcgtttcctc ttccgcccaa ccggggcgct gagcggcggg aacagcggcg ggggctttgt
ggtcccgggg ggtccgagtg tgtgtcaggg gctggggcgg gggatgggcg cggcccctgg
gtatecetea eggteetggt teatgag
327
<210> 2038
<211> 98
<212> PRT
<213> Homo sapiens
<400> 2038
Met Glu Lys Trp Gly Arg Thr Gln Thr Gly Arg Val Arg Leu Glu Cys
                                     10
                 5
Leu Ser Arg Ala His Leu Pro Ser Pro Leu His Ala Gln Gln Ile Gln
```

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20
                                  25
 Thr Pro Arg Pro Leu Val Ala Arg Ala Ser Ile Ser Pro Gly Gly Ala
 Arg Ala Phe Pro Leu Pro Pro Asn Arg Gly Ala Glu Arg Arg Glu Gln
 Arg Arg Gly Leu Cys Gly Pro Gly Gly Ser Glu Cys Val Ser Gly Ala
                                          75
 Gly Ala Gly Asp Gly Arg Gly Pro Trp Val Ser Leu Thr Val Leu Val
                                      90
 His Glu
 <210> 2039
 <211> 307
 <212> DNA
 <213> Homo sapiens
 <400> 2039
accegetgate cactetgega aageggeege gagegaageg ttettggtet tettegagat
cgcgatgtat tgcccggaaa acagcggctt gatgccgtca ttgagaggct ctgggccaac
accggtacgg gcatatgcct gggcggcatt cttttggatg ttgcgaagaa aggacgcatt
cggcgtgccg aaagccaggg atccttcacc gtagaccttg gaccgatgga ggcccccggc
aatcgagtcc ttcgaaattc ccccttggca tacatgtcgg ccatcgtcgt cagccagagt
300
aacgcgt
307
<210> 2040
<211> 94
<212> PRT
<213> Homo sapiens
<400> 2040
Met Ala Asp Met Tyr Ala Lys Gly Glu Phe Arg Arg Thr Arg Leu Pro
Gly Ala Ser Ile Gly Pro Arg Ser Thr Val Lys Asp Pro Trp Leu Ser
                                25
Ala Arg Arg Met Arg Pro Phe Phe Ala Thr Ser Lys Arg Met Pro Pro
                            40
Arg His Met Pro Val Pro Val Leu Ala Gln Ser Leu Ser Met Thr Ala
Ser Ser Arg Cys Phe Pro Gly Asn Thr Ser Arg Ser Arg Arg Arg Pro
Arg Thr Leu Arg Ser Arg Pro Leu Ser Gln Ser Gly Ser Pro
<210> 2041
<211> 348
<212> DNA
<213> Homo sapiens
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<400> 2041
nnecggegat geagggatte georgegatg egetegaace eggegegggg ggegtteete
gccagettee tgeegttege cagaegeate geegaggegg gggtgegeaa ttegetegee
120
cagetggteg ccaagetgae cetgeeegge atgeeegaea tetaceaggg etgegagatg
tgggacetea geetggtega eegggacaat egeegeeeeg tegaetaega gacaegegae
geggeeetgg eeggetgggt egegaeeeeg eeggaggaae gegeegegge getgegeaee
ctgctgacgg attggcgcag cggcgcggtc aagctggccg tgacgcgt
<210> 2042
<211> 116
<212> PRT
<213> Homo sapiens
<400> 2042
Xaa Arg Arg Cys Arg Asp Ser Pro Ala Met Arg Ser Asn Pro Ala Arg
                                    10
                 5
1
Gly Ala Phe Leu Ala Ser Phe Leu Pro Phe Ala Arg Arg Ile Ala Glu
Ala Gly Val Arg Asn Ser Leu Ala Gln Leu Val Ala Lys Leu Thr Leu
Pro Gly Met Pro Asp Ile Tyr Gln Gly Cys Glu Met Trp Asp Leu Ser
                        55
Leu Val Asp Arg Asp Asn Arg Arg Pro Val Asp Tyr Glu Thr Arg Asp
                                        75
                    70
Ala Ala Leu Ala Gly Trp Val Ala Thr Pro Pro Glu Glu Arg Ala Ala
                                    90
Ala Leu Arg Thr Leu Leu Thr Asp Trp Arg Ser Gly Ala Val Lys Leu
                                105
            100
Ala Val Thr Arg
<210> 2043
<211> 712
<212> DNA
<213> Homo sapiens
<400> 2043
gatetgaegg tetegaetaa geetgaecat teegaggtea eegaegeega eettgeegte
gaagattegg tgegeagage cetgtetega atgegeteee gggatgeegt eeaeggegag
gaacgtgccg ataccgggga tggaccccgc cggtggatca ttgatccgat cgacggcact
gegaattite tgegtggggt cecagtgtgg gecaecetea ttgeeeteag egtegaggae
cagattgteg catetgtggt ctetgetect geceteaage gaegetggtg ggeageeegt
300
```

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ggctcaggag catggtcggg caaatccctg gcctcagcga caccgatcca cgtctcgaat
gtgcgcaatc ttgccgacgc attcttgtcc tactcttcgc tgcacggatg ggtcgagagc
ggacgagggc acgggttcgg tgaactcatg cggtcggtgt ggcggacccg agccttcggc
gatttctggt cttacatgat ggtggcagaa ggtgtcgtcg atgtggcatg cgagccqqaa
ctcagcctgc acgacatggc cgcctcgac gctatcgtca ccgaggcggg cggtaagttc
accegetates atggeaaaga eggeeegtgg tetgggaatg etetggegte gaatggttte
cttcatgacc aggccctagc catggtccag cctcaggagt gagcaccgat cg
<210> 2044
<211> 233
<212> PRT
<213> Homo sapiens
<400> 2044
Asp Leu Thr Val Ser Thr Lys Pro Asp His Ser Glu Val Thr Asp Ala
 1
Asp Leu Ala Val Glu Asp Ser Val Arg Arg Ala Leu Ser Arg Met Arg
Ser Arg Asp Ala Val His Gly Glu Glu Arg Ala Asp Thr Gly Asp Gly
                            40
Pro Arg Arg Trp Ile Ile Asp Pro Ile Asp Gly Thr Ala Asn Phe Leu
Arg Gly Val Pro Val Trp Ala Thr Leu Ile Ala Leu Ser Val Glu Asp
Gln Ile Val Ala Ser Val Val Ser Ala Pro Ala Leu Lys Arg Arg Trp
Trp Ala Ala Arg Gly Ser Gly Ala Trp Ser Gly Lys Ser Leu Ala Ser
            100
                                105
Ala Thr Pro Ile His Val Ser Asn Val Arg Asn Leu Ala Asp Ala Phe
        115
                            120
Leu Ser Tyr Ser Ser Leu His Gly Trp Val Glu Ser Gly Arg Gly His
                        135
                                             140
Gly Phe Gly Glu Leu Met Arg Ser Val Trp Arg Thr Arg Ala Phe Gly
                    150
                                         155
Asp Phe Trp Ser Tyr Met Met Val Ala Glu Gly Val Val Asp Val Ala
                                     170
Cys Glu Pro Glu Leu Ser Leu His Asp Met Ala Ala Leu Asp Ala Ile
                                185
                                                    190
Val Thr Glu Ala Gly Gly Lys Pl. ? Thr Gly Leu Asp Gly Lys Asp Gly
                            200
Pro Trp Ser Gly Asn Ala Leu Ala Ser Asn Gly Phe Leu His Asp Gln
                        215
                                             220
Ala Leu Ala Met Val Gln Pro Gln Glu
225
                    230
<210> 2045
<211> 406
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<212> DNA
<213> Homo sapiens
<400> 2045
nnttggacac cggcgactat gccgccaccg cacggatcaa tcgcggaccc agggcagggg
atgegeegga tgggegaegg tgatggaeeg ggegetggae etgggeggte gettegaega
cantacagge tttggeegag gegggttgga agaaaceggt caaceggtgg tttggeeceg
180
catcaatgcc cagaaccaga agcettgcgc attegtecca ggccgttcaa ggccgatggc
gagatcgtcg cgatgactgg cgacggtgtc aacgacgccc cctcgctcaa ggcggcccat
ateggtgteg ccatggacaa acgeggeace gacgtegege gegaggette egecatggte
ctgctcgagg atgattttgg atcgatcgtg cagtcggtcc ggctcg
406
<210> 2046
<211> 135
<212> PRT
<213> Homo sapiens
<400> 2046
Xaa Trp Thr Pro Ala Thr Met Pro Pro Pro His Gly Ser Ile Ala Asp
                                     10
Pro Gly Gln Gly Met Arg Arg Met Gly Asp Gly Asp Gly Pro Gly Ala
Gly Pro Gly Arg Ser Leu Arg Arg Xaa Tyr Arg Leu Trp Pro Arg Arg
Val Gly Arg Asn Arg Ser Thr Gly Gly Leu Ala Pro His Gln Cys Pro
Glu Pro Glu Ala Leu Arg Ile Arg Pro Arg Pro Phe Lys Ala Asp Gly
                                         75
                     70
Glu Ile Val Ala Met Thr Gly Asp Gly Val Asn Asp Ala Pro Ser Leu
                                     90
                85 -
Lys Ala Ala His Ile Gly Val Ala Met Asp Lys Arg Gly Thr Asp Val
                                 105
             100
Ala Arg Glu Ala Ser Ala Met Val Leu Leu Glu Asp Asp Phe Gly Ser
                             120
        115
 Ile Val Gln Ser Val Arg Leu
                         135
     130
 <210> 2047
 <211> 796
 <212> DNA
 <213> Homo sapiens
 <400> 2047
 aagetttgga acgagaceee tgagetetgg gtteageeee gaggaageee ageaacagga
 tgaggaattt gagaagaaga ttccaagtgt ggaagacagc cttggagagg gcagcaggga
 120
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tgctggccgg ccaggagaga gaggatccgg gggcttgttc agtcctagca ctgcccacgt
 180
 gccggatggg gcactcgggc agagagacca gagcagctgg caaaacagtg atgctagcca
 ggaggtggga gggcatcagg agagacagca ggcaggggct cagggccctg gcagtgctga
 cctggaagat ggggagatgg gaaagcgagg ctgggtcggt gagtttagcc tcagtgttgg
 cccccagcga gaggcagcat ttagcccagg gcagcaggac tggagccggg acttctgcat
 cgaggccagt gagaggagct atcagtttgg catcattggc aacgacagag tgagtggtgc
 tggctttagc cettetagca agatggaagg tggtcacttt gtgcctcctg ggaagaccac
 agetggeteg gtggaetgga etgaeeaget gggteteagg aaettggaag tgteeagetg
 tgtgggttet gggggetega gegaggeeag ggagagtgee gtgggaeaga tgggetggte
aggtggcctg agcttgagag acatgaacct gaccggctgt ttggaaagtg gagggtctga
720
780
caaagatttg gctgag
796
<210> 2048
<211> 160
<212> PRT
<213> Homo sapiens
<400> 2048
Met Gly Lys Arg Gly Trp Val Gly Glu Phe Ser Leu Ser Val Gly Pro
Gln Arg Glu Ala Ala Phe Ser Pro Gly Gln Gln Asp Trp Ser Arg Asp
Phe Cys Ile Glu Ala Ser Glu Arg Ser Tyr Gln Phe Gly Ile Ile Gly
                           40
Asn Asp Arg Val Ser Gly Ala Gly Phe Ser Pro Ser Ser Lys Met Glu
Gly Gly His Phe Val Pro Pro Gly Lys Thr Thr Ala Gly Ser Val Asp
                                       75
Trp Thr Asp Gln Leu Gly Leu Arg Asn Leu Glu Val Ser Ser Cys Val
Gly Ser Gly Gly Ser Ser Glu Ala Arg Glu Ser Ala Val Gly Gln Met
           100
                              105
Gly Trp Ser Gly Gly Leu Ser Leu Arg Asp Met Asn Leu Thr Gly Cys
Leu Glu Ser Gly Gly Ser Glu Glu Pro Gly Gly Ile Gly Ile Gly Glu
                      135
Lys Asp Trp Thr Ser Asp Val Asn Val Lys Ser Lys Asp Leu Ala Glu
145
                   150
                                      155
<210> 2049
<211> 516
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<212> DNA
 <213> Homo sapiens
<400> 2049
egegtegett aeggtgeget gaataceage etgetggege tggeggteag ettegegteg
ctgttcctcg ggatagtgtt cgggctgatg ccacgtctga tgtgcggggt gattgaactg
gccaacgctc ccccgccaat cgccctgggc ctgttagtag tcgccattag cggcccttca
gcctacggtg ccgcctgtgc ggtgatgttg gtcagttggg ctccgctggc cgcccattgt
240
gettegttgt tggeggaage eegeacgeag eestatatee geatgttgee ggtattggge
. 300
gtcggccgat ggcgcacgct gacccactac ctgctgccgg cgctctctgc tcccctgctg
360
cgccacgcca tgttgcgtct gccgggcatt gcgctggcgc tggcggcctt gggttttttt
ggtcttgggc cgcagccacc cagtgcagaa tgggggctgg tgctggcgga aggcatgcct
tatctcgaac gggcgccctg gggagtcctg gcaccg
 516
 <210> 2050
 <211> 172
 <212> PRT
 <213> Homo sapiens
 <400> 2050
Arg Val Ala Tyr Gly Ala Leu Asn Thr Ser Leu Leu Ala Leu Ala Val
                                     10
Ser Phe Ala Ser Leu Phe Leu Gly Ile Val Phe Gly Leu Met Pro Arg
                                 25
 Leu Met Cys Gly Val Ile Glu Leu Ala Asn Ala Pro Pro Pro Ile Ala
Leu Gly Leu Leu Val Val Ala Ile Ser Gly Pro Ser Ala Tyr Gly Ala
                         55
Ala Cys Ala Val Met Leu Val Ser Trp Ala Pro Leu Ala Ala His Cys
                     70
                                         75
Ala Ser Leu Leu Ala Glu Ala Arg Thr Gln Pro Tyr Ile Arg Met Leu
                                     90
 Pro Val Leu Gly Val Gly Arg Trp Arg Thr Leu Thr His Tyr Leu Leu
             100
                                 105
 Pro Ala Leu Ser Ala Pro Leu Leu Arg His Ala Met Leu Arg Leu Pro
                             120
         115
 Gly Ile Ala Leu Ala Leu Ala Ala Leu Gly Phe Phe Gly Leu Gly Pro
                                             140
                         135
 Gln Pro Pro Ser Ala Glu Trp Gly Leu Val Leu Ala Glu Gly Met Pro
                                                              160
                     150
 Tyr Leu Glu Arg Ala Pro Trp Gly Val Leu Ala Pro
                 165
 <210> 2051
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<211> 411

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<212> DNA
 <213> Homo sapiens
 <400> 2051
 gagcaaaact atcgttctac cggcaatatt ctgaaaagtg ccaaccaact tatttcgaat
 60
 aatagtgatc gtctcggtaa gaatttatgg accgacggtg aaatggggga gccagtaggt
 atttatgcag catttaatga attagatgag gcaaaatttg tggcgtctca aatccaaaat
 tgggtagatg atggtgggga attagatgat tgtgctgttt tatatcgtag taatagccaa
 tetegtgtta ttgaagaage ettgattegt tgecaaatte ettategaat ttatggeggg
atgcgattct tcgaacgcca agaaattaaa gatgcgttgg catatttacg tttaattaat
360
aatcgtcaag atgatgccgc atttgagcgt gtgattaata cgcctacgcg t
411
<210> 2052
<211> 137
<212> PRT
<213> Homo sapiens
<400> 2052
Glu Gln Asn Tyr Arg Ser Thr Gly Asn Ile Leu Lys Ser Ala Asn Gln
                                     10
Leu Ile Ser Asn Asn Ser Asp Arg Leu Gly Lys Asn Leu Trp Thr Asp
            20
Gly Glu Met Gly Glu Pro Val Gly Ile Tyr Ala Ala Phe Asn Glu Leu
                             40
Asp Glu Ala Lys Phe Val Ala Ser Gln Ile Gln Asn Trp Val Asp Asp
Gly Gly Glu Leu Asp Asp Cys Ala Val Leu Tyr Arg Ser Asn Ser Gln
                                         75
Ser Arg Val Ile Glu Glu Ala Leu Ile Arg Cys Gln Ile Pro Tyr Arg
                85 .
                                     90
Ile Tyr Gly Gly Met Arg Phe Phe Glu Arg Gln Glu Ile Lys Asp Ala
            100
                                105
Leu Ala Tyr Leu Arg Leu Ile Asn Asn Arg Gln Asp Asp Ala Ala Phe
                            120
                                                 125
Glu Arg Val Ile Asn Thr Pro Thr Arg
    130 -
                        135
<210> 2053
<211> 287
<212> DNA
<213> Homo sapiens
<400> 2053
necatggaag cetteaatet tgtaagagaa agtgaacage tgttttecat atgccaaate
ccgctcctct gctggatcct gtgtaccagt ctgaagcaag agatgcagaa aggaaaagac
120 .
```

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ctggccctga cctgccagag cactacctct gtgtactcct ctttcgtctt taacctgttc
180
acacctgagg gtgccgaggg cccgactccg caaacccagc accagctgaa ggccctgtgc
tecetggetg cagagggtat gtggacagac acatttgagt tttgtga
287
<210> 2054
<211> 79
<212> PRT
<213> Homo sapiens
<400> 2054
Ile Cys Gln Ile Pro Leu Leu Cys Trp Ile Leu Cys Thr Ser Leu Lys
1
Gln Glu Met Gln Lys Gly Lys Asp Leu Ala Leu Thr Cys Gln Ser Thr
                                25
Thr Ser Val Tyr Ser Ser Phe Val Phe Asn Leu Phe Thr Pro Glu Gly
                            40
        35
Ala Glu Gly Pro Thr Pro Gln Thr Gln His Gln Leu Lys Ala Leu Cys
                        55
Ser Leu Ala Ala Glu Gly Met Trp Thr Asp Thr Phe Glu Phe Cys
                    70
                                        75
<210> 2055
<211> 298
<212> DNA
<213> Homo sapiens
<400> 2055
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teccacacca ecatggaaaa tggtettgge attetggget ggggegtegg tggtattgaa
geogaggetg ctatgettgg ccageccate tecatgetta tececegtgt tgttggettt
180
aaacttactg gccaaacaca gccgggtgtc accgctacag atgttgttct taccattact
gatatgette gecageatgg tgtgggtgga aaattegggg aattetatgg gggaageg
<210> 2056
<211> 99
<212> PRT
<213> Homo sapiens
<400> 2056
Xaa Arg Val Val Met Asn Asn Asp Gly Val Leu Tyr Pro Asp Thr Cys
Val Gly Thr Asp Ser His Thr Thr Met Glu Asn Gly Leu Gly Ile Leu
            20
                                 25
Gly Trp Gly Val Gly Gly Ile Glu Ala Glu Ala Ala Met Leu Gly Gln
Pro Ile Ser Met Leu Ile Pro Arg Val Val Gly Phe Lys Leu Thr Gly
```

```
50
                         55
                                             60
Gln Thr Gln Pro Gly Val Thr Ala Thr Asp Val Val Leu Thr Ile Thr
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Asp Met Leu Arg Gln His Gly Val Gly Gly Lys Phe Gly Glu Phe Tyr
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                                     90
Gly Gly Ser
<210> 2057
<211> 569
<212> DNA
<213> Homo sapiens
<400> 2057
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gcagaaattc gtaaggctct tgaagacgga gatcgccaaa aagccaaacg attagctgaa
caaaatctag ttggaccaaa caacgcccag tatggtcgtt atctagcctt tggtgatatc
ttcatggtct tcaataacca gaaaaagggg ctggatacag ttacagacta tcaccgtggt
240
ttggatatca cagaagccac tactacaact tcttacaccc aagatggaac gacctttaaa
agagaaacct totcaagtta cootgatgat gttactgtta otcacttgac ccaaaaaqqq
360
gacaaaaaac ttgattttac agtttggaat agcttaacag aagatttact tqctaacqqa
420
gactactcag cggaatattc taactacaag agtggccatg ttacgacaga cccaaatggt
atcctactaa aaggtacagt caaagataat ggcctccagt tcgcatccta tctaggaatt
aaaacggacg gaaaagttac tgttcatga
569
<210> 2058
<211> 128
<212> PRT
<213> Homo sapiens
<400> 2058
Met Val Phe Asn Asn Gln Lys Lys Gly Leu Asp Thr Val Thr Asp Tyr
His Arg Gly Leu Asp Ile Thr Glu Ala Thr Thr Thr Thr Ser Tyr Thr
                                25
Gln Asp Gly Thr Thr Phe Lys Arg Glu Thr Phe Ser Ser Tyr Pro Asp
Asp Val Thr Val Thr His Leu Thr Gln Lys Gly Asp Lys Lys Leu Asp
Phe Thr Val Trp Asn Ser Leu Thr Glu Asp Leu Leu Ala Asn Gly Asp
Tyr Ser Ala Glu Tyr Ser Asn Tyr Lys Ser Gly His Val Thr Thr Asp
                                    90
Pro Asn Gly Ile Leu Leu Lys Gly Thr Val Lys Asp Asn Gly Leu Gln
```

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105
                                                    110
            100
Phe Ala Ser Tyr Leu Gly Ile Lys Thr Asp Gly Lys Val Thr Val His
                                                125
                            120
<210> 2059
<211> 644
<212> DNA
<213> Homo sapiens
<400> 2059
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agcaatcgac ctgtaggact cagccatgat cgactgggca tcctcgtata gtcgcgatgc
cqcaaccqcc tqcqcttcca agcctgcagc gacgtaagag gccctctcac acactgaacc
180
gategeteca gacaaegtgg aagegataae etegegtege ttetgetgat tetgggeeaa
gctcgacaag aagaaccgca gaggggcgac ggcctggtca gggagcgcac cttcagcgtt
cgtcttggtc tccgggacag caaaaagcgg ggaatcagcc aggccacgct ccgtcatgag
teggeegagg teegeeggta ceteteteat ggetteeaca ggaacgeggt cacacaccae
cgcgatcgac gcgtgcctct cttgagcctc gttgaggaaa tcccacggca cagcgtcagc
gtagcgggct gctgaggtga caaagatcca cagatccgcg gcctggagca actgagccgc
cagatcacga ttgcgggtca ccacagagtc gatgtccggg gcatcgagga tggccaaacc
tegeggaate ettgacteeg egacgagetg caaactegae gegt
644
<210> 2060
<211> 130
<212> PRT
<213> Homo sapiens
<400> 2060
Met Arg Glu Val Pro Ala Asp Leu Gly Arg Leu Met Thr Glu Arg Gly
Leu Ala Asp Ser Pro Leu Phe Ala Val Pro Glu Thr Lys Thr Asn Ala
Glu Gly Ala Leu Pro Asp Gln Ala Val Ala Pro Leu Arg Phe Phe Leu
       35
                            40
Ser Ser Leu Ala Gln Asn Gln Gln Lys Arg Arg Glu Val Ile Ala Ser
                        55
Thr Leu Ser Gly Ala Ile Gly Ser Val Cys Glu Arg Ala Ser Tyr Val
                                        75
Ala Ala Gly Leu Glu Ala Gln Ala Val Ala Ala Ser Arg Leu Tyr Glu
Asp Ala Gln Ser Ile Met Ala Glu Ser Tyr Arg Ser Ile Ala Ala Gln
Ser Ala Asp Gly Thr Leu Leu Arg Gly Glu Val Leu Ala Arg Trp His
```

125

120

115

```
Glu Phe
    130
<210> 2061
<211> 481
<212> DNA
<213> Homo sapiens
<400> 2061
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atgctgtgat tacgcgccag ccccgtcaca ccqtacgggt ggtaggactg ggcaaagaaq
acgccgccac ctggatgcac tgaggtgtgc acagccacgt ggagatgatg ctgggggctc
acggtgactc tcaggaggcc ctggcctggc ctatctggag ccttctctgt gaaatgaggc
tggtaacgcc cactagcagg gttgtagggg acatggatct gtggccacct cctcaagggt
tgccacacgc accaggtcct gactgggagt ccggcccca gggcctgtgg atggctggcc
360
tgggcccagc ctccgcccc aagggtgctg gcacctggca tgtgcccgac agttggggcc
ggctggtggg aaggtgtgtg tcaggtggcg gagcctcggt gccaggatct cactcacgcg
480
t
481
<210> 2062
<211> 133
<212> PRT
<213> Homo sapiens
<400> 2062
Met Pro Gly Ala Ser Thr Leu Gly Gly Gly Gly Trp Ala Gln Ala Ser
His Pro Gln Ala Leu Gly Ala Gly Leu Pro Val Arg Thr Trp Cys Val
Trp Gln Pro Leu Arg Arg Trp Pro Gln Ile His Val Pro Tyr Asn Pro
                            40
Ala Ser Gly Arg Tyr Gln Pro His Phe Thr Glu Lys Ala Pro Asp Arg
Pro Gly Gln Gly Leu Leu Arg Val Thr Val Ser Pro Gln His His Leu
                    70
His Val Ala Val His Thr Ser Va. His Pro Gly Gly Val Phe Phe
Ala Gln Ser Tyr His Pro Tyr Gly Val Thr Gly Leu Ala Arg Asn His
                                105
Ser Ile Trp Gly His Thr Met Ala Thr Pro Ala Pro Ser Cys Val Ala
        115
Leu Leu Thr Arg Leu
   130
```

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<210> 2063
<211> 419
<212> DNA
<213> Homo sapiens
<400> 2063
geeggegeeg tegagegegt geettteaat ategaggeee aagacatggt getgeteate
geggacacca atgeccegca catgetttee gaeggeeaat aegeeteeeg eeggggeate
ategacgecq tecaatetge egeoggttge tecateegeg agatetegaa tgeggtggae
tttgccgcca ccgtcaatcc cgccgaggcg gaactctatc gccgccgcgt gcaccacgtg
gtggaaqaaa ccaaccggac cctagatgcc gctaccgcgc tggcatcttc cgatctagat
acatteegge ggettatgeg egagageeae atetecetge gegacettta tgaggteace
actecqqaqe teqactecqt ttttaccqeq qeeqqegage tgggcgcteg catgannnn
419
<210> 2064
<211> 139
<212> PRT
<213> Homo sapiens
<400> 2064
Ala Gly Ala Val Glu Arg Val Pro Phe Asn Ile Glu Ala Gln Asp Met
                                    10
Val Leu Leu Ile Ala Asp Thr Asn Ala Pro His Met Leu Ser Asp Gly
            20
                                25
Gln Tyr Ala Ser Arg Arg Gly Ile Ile Asp Ala Val Gln Ser Ala Ala
                            40
Gly Cys Ser Ile Arg Glu Ile Ser Asn Ala Val Asp Phe Ala Ala Thr
                        55
                                            60
Val Asn Pro Ala Glu Ala Glu Leu Tyr Arg Arg Arg Val His His Val
                    70
                                        75
Val Glu Glu Thr Asn Arg Thr Leu Asp Ala Ala Thr Ala Leu Ala Ser
                                    90
Ser Asp Leu Asp Thr Phe Arg Arg Leu Met Arg Glu Ser His Ile Ser
            100
                                105
Leu Arg Asp Leu Tyr Glu Val Thr Thr Pro Glu Leu Asp Ser Val Phe
                            120
Thr Ala Ala Gly Glu Leu Gly Ala Arg Met Xaa
   130
                        135
<210> 2065
<211> 598
<212> DNA
<213> Homo sapiens
<400> 2065
geoggegeta tggcctetet getegeegae geogeegatg ceetteeegg cgcaaaggtg
60
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egegegaceg tractggate ggegggattg ggaacegeag aggeattggg cettaettte
attcaggagg tcatagctga gacggccgcc gtccaacgtt ggaatcccga cgccgacgtg
180
cttctcgaac tcggtggtga ggatgccaag atcacctacc ttaagccggt ccccgaacag
cgcatgaatg gttcgtgtgc tggtggcacc ggtgccttca tcgaccagat ggctaccctg
ctgcacaccg acactecegg ceteaatgac etegcatece gagecaagae catecateeg
ategeetege getgtggtgt ttttgeeaag teegacette ageeceteat taacgaggga
gecegecacg aggatetgge tgeeteggte etgeaggetg tegecactea qtqcattqce
ggcctggcat gtggtcgccc gattcgaggt aaggtcatct tccttggcgg tccqcttcac
tttatgccaa gtttgcgaga cgctttctcg cgcgtcctcg acggtaaggt tgacgcgt
598
<210> 2066
<211> 199
<212> PRT
<213> Homo sapiens
<400> 2066
Ala Gly Ala Met Ala Ser Leu Leu Ala Asp Ala Ala Asp Ala Leu Pro
Gly Ala Lys Val Arg Ala Thr Val Thr Gly Ser Ala Gly Leu Gly Thr
Ala Glu Ala Leu Gly Leu Thr Phe Ile Gln Glu Val Ile Ala Glu Thr
                            40
Ala Ala Val Gln Arg Trp Asn Pro Asp Ala Asp Val Leu Leu Glu Leu
                        55
                                            60
Gly Glu Asp Ala Lys Ile Thr Tyr Leu Lys Pro Val Pro Glu Gln
                    70
                                        75
Arg Met Asn Gly Ser Cys Ala Gly Gly Thr Gly Ala Phe Ile Asp Gln
                85
Met Ala Thr Leu Leu His Thr Asp Thr Pro Gly Leu Asn Asp Leu Ala
                                105
Ser Arg Ala Lys Thr Ile His Pro Ile Ala Ser Arg Cys Gly Val Phe
                            120
                                                125
Ala Lys Ser Asp Leu Gln Pro Leu Ile Asn Glu Gly Ala Arg His Glu
    130
                        135
                                            140
Asp Leu Ala Ala Ser Val Leu Gln Ala Val Ala Thr Gln Cys Ile Ala
                    150
                                        155
Gly Leu Ala Cys Gly Arg Pro Ile Arg Gly Lys Val Ile Phe Leu Gly
                165
                                    170
Gly Pro Leu His Phe Met Pro Ser Leu Arg Asp Ala Phe Ser Arg Val
           180
                                185
                                                    190
Leu Asp Gly Lys Val Asp Ala
       195
<210> 2067
<211> 366
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<212> DNA
<213> Homo sapiens
<400> 2067
ttccagcaga tgctgcaaac ctggacccgc agcggcacgc tgcaggaggc cgtggccaac
aagategeeg aatggetgga tgeegaeetg caacagtggg acattteeeg egatgeaeeg
tactteggtt tegagatece gggegageca ggeaagtatt tetaegtgtg getggaegeg
cegategget acatggecag tttcaagaac ctgtgcgacc gcacgccgga gctggacttc
gatgetttet gggecaagga etecacegee gagetgtace attteategg caaggacate
gteaacttcc acgccctgtt ctggccggcg atgctcgaag gctcgggcta ccgtaaaccg
360
accggt
366
<210> 2068
<211> 122
<212> PRT
<213> Homo sapiens
<400> 2068
Phe Gln Gln Met Leu Gln Thr Trp Thr Arg Ser Gly Thr Leu Gln Glu
 1
Ala Val Ala Asn Lys Ile Ala Glu Trp Leu Asp Ala Asp Leu Gln Gln
                                25
            20
Trp Asp Ile Ser Arg Asp Ala Pro Tyr Phe Gly Phe Glu Ile Pro Gly
                            40
                                                 45
Glu Pro Gly Lys Tyr Phe Tyr Val Trp Leu Asp Ala Pro Ile Gly Tyr
Met Ala Ser Phe Lys Asn Leu Cys Asp Arg Thr Pro Glu Leu Asp Phe
                                         75
                     70
Asp Ala Phe Trp Ala Lys Asp Ser Thr Ala Glu Leu Tyr His Phe Ile
                                     90
Gly Lys Asp Ile Val Asn Phe His Ala Leu Phe Trp Pro Ala Met Leu
                                 105
            100
Glu Gly Ser Gly Tyr Arg Lys Pro Thr Gly
                             120
        115
 <210> 2069
 <211> 280
 <212> DNA
 <213> Homo sapiens
 <400> 2069
 cctagagagg atggtggaga ctgtgcgtgt gcagggtgtt ccggaacctt ccctgggatg
 catggggcct cgccgcaggc catctctcca gacctgggct caccetgccc ctgtgctgtt
 geetttgget ggaatteeae cecageette ttgeeteaag aacgeeette eeeetteaga
 180
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tctcatgggc acaggccccg tcttcctaaa cggggtcaga gcccccagta atcatgacaa
 agaccctctc ctcgatcaag ctttggtcaa gctcctaccc
 280
 <210> 2070
 <211> 90
 <212> PRT
 <213> Homo sapiens
 <400> 2070
Met Val Glu Thr Val Arg Val Gln Gly Val Pro Glu Pro Ser Leu Gly
 Cys Met Gly Pro Arg Arg Pro Ser Leu Gln Thr Trp Ala His Pro
            20
                                 25
Ala Pro Val Leu Leu Pro Leu Ala Gly Ile Pro Pro Gln Pro Ser Cys
                             40
                                                 45
Leu Lys Asn Ala Leu Pro Pro Ser Asp Leu Met Gly Thr Gly Pro Val
                         55
                                             60
Phe Leu Asn Gly Val Arg Ala Pro Ser Asn His Asp Lys Asp Pro Leu
                     70
Leu Asp Gln Ala Leu Val Lys Leu Leu Pro
<210> 2071
<211> 399
<212> DNA
<213> Homo sapiens
<400> 2071
acgogtgtcc agcagactta gaaagcaggt tootottgtc atacagcacg ttaacatagc
tgacgaggcc tgggtgtctt catcagtact gtgatgactc tttcaccttt gacttcagat
gctggcgctt tttacttttt gtgccaaact ctacacatga aacacttttg gaataactac
agacatgact ttctttatct ggggaaaagg agggcattaa accagattag gggctgggag
gggaggttgt caggggatga gctgctcctg aggaagaggc agagatcaag cttcactcag
cagctggatt ctcacctagt ttatagactg aaatcctgca aggtggttac aacagtgaac
aatatgttca tacataaaga ctctaccctc aggtgatca
399
<210> 2072
<211> 100
<212> PRT
<213> Homo sapiens
<400> 2072
Met Thr Leu Ser Pro Leu Thr Ser Asp Ala Gly Ala Phe Tyr Phe Leu
                 5
Cys Gln Thr Leu His Met Lys His Phe Trp Asn Asn Tyr Arg His Asp
```

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25
Phe Leu Tyr Leu Gly Lys Arg Arg Ala Leu Asn Gln Ile Arg Gly Trp
Glu Gly Arg Leu Ser Gly Asp Glu Leu Leu Leu Arg Lys Arg Gln Arg
Ser Ser Phe Thr Gln Gln Leu Asp Ser His Leu Val Tyr Arg Leu Lys
                                        75
                    70
Ser Cys Lys Val Val Thr Thr Val Asn Asn Met Phe Ile His Lys Asp
                                                         95
                                    90
Ser Thr Leu Arg
            100
<210> 2073
<211> 339
<212> DNA
<213> Homo sapiens
<400> 2073
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cettecteca cetteaagee ageageggag geetgagtee tteteatgee atetetetgt
totototot gootootot coacactgaa ggaccootgt gatcacactg geoccoccac
cggatgaccc aggataatcc atctccctgt ttgaaggtcg gctgattagc aaccttcatt
ccatctgcct ccttcattcc ccctggccat gtaatgggat tcacagcttc tggggattag
gacatggaca tettgtggcg ggggcataat tetgtcgac
339
<210> 2074
<211> 85
<212> PRT
<213> Homo sapiens
<400> 2074
Met Lys Glu Ala Asp Gly Met Lys Val Ala Asn Gln Pro Thr Phe Lys
Gln Gly Asp Gly Leu Ser Trp Val Ile Arg Trp Gly Gly Gln Cys Asp
His Arg Gly Pro Ser Val Trp Arg Arg Gln Glu Arg Glu Gln Arg
Asp Gly Met Arg Arg Thr Gln Ala Ser Ala Ala Gly Leu Lys Val Glu
Glu Gly Ala Thr Ser Gln Gly Thr Gln Ala Ala Ser Arg Ser Trp Lys
Gly Thr Glu Val Asp
 <210> 2075
 <211> 481
 <212> DNA
 <213> Homo sapiens
```

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<400> 2075
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 atcctgagcg ctcctgccca actgggcctg ctgaggaaga tccgcctctg gcacgacagc
 cgtgggcctt ccccaggctg gttcatcagc cacgtgatgg tgaaggagct gcacacggga
cagggctggt tettecetge ceagtgetgg etgtetgeeg geaggeatga tggtegegtg
gagegggage teacetgtet geaaggggga eteggettet ggaagetttt etattgeaag
ttcacagagt acctggagga tttccatgtc tggctgtcgg tgtacagcag gccctcctcc
agcogotace tgcacacgoo gogococace gtgtccttct cootgotgtg cgtctacgog
t.
481
<210> 2076
<211> 160
<212> PRT
<213> Homo sapiens
<400> 2076
Xaa Ala Arg Leu Thr Ser Lys Val Tyr Ile Val Leu Cys Gly Asp Asn
 1
Gly Leu Ser Glu Thr Lys Glu Leu Ser Cys Pro Glu Lys Ser Leu Phe
                                 25
Glu Arg Asn Ser Arg His Thr Phe Ile Leu Ser Ala Pro Ala Gln Leu
                             40
Gly Leu Leu Arg Lys Ile Arg Leu Trp His Asp Ser Arg Gly Pro Ser
                                             60
Pro Gly Trp Phe Ile Ser His Val Met Val Lys Glu Leu His Thr Gly
                    70
                                         75
Gln Gly Trp Phe Phe Pro Ala Gln Cys Trp Leu Ser Ala Gly Arg His
                85
                                     90
Asp Gly Arg Val Glu Arg Glu Leu Thr Cys Leu Gln Gly Gly Leu Gly
                                 105
Phe Trp Lys Leu Phe Tyr Cys Lys Phe Thr Glu Tyr Leu Glu Asp Phe
                            120
His Val Trp Leu Ser Val Tyr Ser Arg Pro Ser Ser Ser Arg Tyr Leu
                        135
                                             140
His Thr Pro Arg Pro Thr Val Ser Phe Ser Leu Leu Cys Val Tyr Ala
145
                    150
                                                             160
<210> 2077
<211> 1410
<212> DNA
<213> Homo sapiens
<400> 2077
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caaattgaac ccaactgttt gcgaattcgg cacgagtaaa gatcttttt ttttttttt
120
ttttttttt tttttttt ttttgctttc taaagtggct ttaatatcac acaagcggct
180
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agtccaggag ccttaggaag gctgaaacaa gccctgacca gcaggcttag ttgtcctgag
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ggcagcatgg gaaaggctca gactgcaggt tcatcccgca ggatggtaag gacacgtgct
cercerege aagageagge rrgrgeaeag eeeggeaeag ggeeageeag ggeggeeeer
geggetgtge agegettace agggggagga gttcagecat caggacettt tecaagtgga
600
tetgetggte cageacagee actegeaget tgagggeege cagggtetge ageteetggg
660
tgctggagta gacaagcagc tgggnnggct ccatgcaggc tccgctctac ccccacagga
720
eggegagget eeggggggee tnnceccaca gacatggtet tggtggetgt teegecaceg
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gegtgagcag geageggtae teetgeatee agteeatggg ggetgetgag ageteeteee
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acaggetega gttetgggaa getgetttee tgaatgeege aggeageege ageaggtgee
cetteteett gagtgtgaag gettetgggg eetgaggage ageggatggg gecatttget
ggtccctgag gcccgcccca ggcctggggg ttcgggctcc catcccaaca cgggtcccat
1260
ceccactga cageageegg egeteagggt ggeeettgge aggeacegtg gtetggegga
ggcccttggt gggtctcgtg tctgaagcat ggccaccagc ttggcctggg gaatgcggtg
gggcggaggc tgtcgtgcca gaagaggtga
1410
 <210> 2078
 <211> 106
 <212> PRT
 <213> Homo sapiens
```

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<400> 2078
 Gly His Leu Val Gln Phe Thr Arg Phe Pro Arg Glu Ala Gln Ala Ser
 Leu Gly Pro Arg Ala Gln Cys Gln Gly Arg His Pro Gln Ser Pro Ser
                                 25
 Glu Gln Ala Glu Gly Ser Met Gly Lys Ala Gln Thr Ala Gly Ser Ser
 Arg Arg Met Val Arg Thr Arg Ala Pro Pro Ser Gln Glu Gln Ala Cys
 Ala Gln Pro Gly Thr Gly Pro Ala Arg Ala Ala Pro Ala Ala Val Gln
                     70
 Arg Leu Pro Gly Gly Gly Val Gln Pro Ser Gly Pro Phe Pro Ser Gly
                                     90
 Ser Ala Gly Pro Ala Gln Pro Leu Ala Ala
            100
 <210> 2079
 <211> 565
 <212> DNA
 <213> Homo sapiens
<400> 2079
atttacctcg caaccgaccc tgatcgtgaa ggtgaaagca tcagctggca catccagcag
gtactggcgg tcaaatccta caaacgcatt accttcaacg agatcactct caagcgcgtt
120
gaagaggcac tggccaatcc tcgacaaatc gatctgaaca gagttgcctc acaggaatgc
cggcgtgtgc ttgaccgctt ggtggggtac ctggtgaccc aagagttgcg gcgcctgatg
ggcaaaccta cttccgctgg ccgcgttcaa tcacccgccg tgtttcttgt ggtcttgcgc
gaacgcgaga tccgcaactt tcaggtgatc aatcactttg gcgtgcgtct gttctttgcc
gatgtaagtc ggggcaccac ttggtatgcc gagtggcaac cggtaccgga tttcgcaagc
420
aagcacttcc cctatgttca ggatagcaac ctggctcagc acgtcgccgg cactcgaaat
gtggtcgtgg agtcctgcga ggatcgcaag gccgagcgtc atcctcctgc accattcatc
tcatccactc ttcaacagge cgcca
565
<210> 2080
<211> 188
<212> PRT
<213> Homo sapiens
<400> 2080
Ile Tyr Leu Ala Thr Asp Pro Asp Arg Glu Gly Glu Ser Ile Ser Trp
His Ile Gln Gln Val Leu Ala Val Lys Ser Tyr Lys Arg Ile Thr Phe
Asn Glu Ile Thr Leu Lys Arg Val Glu Glu Ala Leu Ala Asn Pro Arg
```

```
40
        35
Gln Ile Asp Leu Asn Arg Val Ala Ser Gln Glu Cys Arg Arg Val Leu
                        55
Asp Arg Leu Val Gly Tyr Leu Val Thr Gln Glu Leu Arg Arg Leu Met
                                        75
                    70
Gly Lys Pro Thr Ser Ala Gly Arg Val Gln Ser Pro Ala Val Phe Leu
                                    90
Val Val Leu Arg Glu Arg Glu Ile Arg Asn Phe Gln Val Ile Asn His
                                105
          100
Phe Gly Val Arg Leu Phe Phe Ala Asp Val Ser Arg Gly Thr Thr Trp
        115
                            120
Tyr Ala Glu Trp Gln Pro Val Pro Asp Phe Ala Ser Lys His Phe Pro
                        135
Tyr Val Gln Asp Ser Asn Leu Ala Gln His Val Ala Gly Thr Arg Asn
                                        155
                    150
Val Val Val Glu Ser Cys Glu Asp Arg Lys Ala Glu Arg His Pro Pro
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Ala Pro Phe Ile Ser Ser Thr Leu Gln Gln Ala Ala
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<210> 2081
<211> 319
<212> DNA
<213> Homo sapiens
<400> 2081
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aggttccatc atcaacgggt tccactagta attttggtgt gtggaactgc ctgtactgga
120
aaatcaacaa tcgctacaca acttgctcag aggctcaatt tgcctaatgt tttgcagacg
gacatggtgt atgagetget geggacatea acagatgege caettaette agtteetgtg
240
tgggctcgcg attttaattc acctgaagag cttatcactg aattctgcag agaatgcaga
gttgtacgca agggtttgg
319
<210> 2082
<211> 106
<212> PRT
<213> Homo sapiens
<400> 2082
Lys Leu Met Glu Lys Arg Gly Tyr Gly Glu Glu Tyr Ile Asn Arg Tyr
Lys Met Met Thr Arg Phe His His Gln Arg Val Pro Leu Val Ile Leu
                                 25
             20
Val Cys Gly Thr Ala Cys Thr Gly Lys Ser Thr Ile Ala Thr Gln Leu
                             40
Ala Gln Arg Leu Asn Leu Pro Asn Val Leu Gln Thr Asp Met Val Tyr
                                             60
Glu Leu Leu Arg Thr Ser Thr Asp Ala Pro Leu Thr Ser Val Pro Val
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70
                                          75
 Trp Ala Arg Asp Phe Asn Ser Pro Glu Glu Leu Ile Thr Glu Phe Cys
               ∵ 85
                                     90
 Arg Glu Cys Arg Val Val Arg Lys Gly Leu
             100
                                 105
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 <211> 382
 <212> DNA
 <213> Homo sapiens
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 atacctactg ttgaatgcaa ctgtggccac gttttctgct ttggctgtgg tttggatgga
caccageegg teatttgtge tgttgteege ttgtggetga aaaaatgtge ggatgaeagt
gagacgtcca actggatcgg cgctaatacc aaggaatgcc ccaaatgctg ttcgacgatt
gaaaagaatg gcggatgtaa tcatatgacg tgtcgcaagt gcaaatacga attttgttgg
atttgctcgg gcccatggtc ggagcacgga aacaactatt acaactgcaa tcggtacgat
gaaaaggcag gagatgaagg tn
382
<210> 2084
<211> 127
<212> PRT
<213> Homo sapiens
<400> 2084
Xaa Pro Asp Cys Asp Met Ala Val Glu Cys Ala Val Thr Arg Lys Gln
Leu Tyr Thr Ile Ile Pro Thr Val Glu Cys Asn Cys Gly His Val Phe
                                25
Cys Phe Gly Cys Gly Leu Asp Gly His Gln Pro Val Ile Cys Ala Val
Val Arg Leu Trp Leu Lys Lys Cys Ala Asp Asp Ser Glu Thr Ser Asn
Trp Ile Gly Ala Asn Thr Lys Glu Cys Pro Lys Cys Cys Ser Thr Ile
                                        75
Glu Lys Asn Gly Gly Cys Asn His Met Thr Cys Arg Lys Cys Lys Tyr
                85
Glu Phe Cys Trp Ile Cys Ser Gly Pro Trp Ser Glu His Gly Asn Asn
                                105
Tyr Tyr Asn Cys Asn Arg Tyr Asp Glu Lys Ala Gly Asp Glu Gly
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<210> 2085
<211> 478
<212> DNA
<213> Homo sapiens
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atceggegte gegtggagga ageegeegaa eteetegace teacegaeta tetggaeege
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cgttcccccc gcgtcttctt gatggacgag cctctttcta acctggatgc gcgtctgcgt
gtccgcaccc gcgcccagat tgcggaactg cagcgccgcc tgggcaccac caccgtttat
gtcacccatg accaggtgga ggctatgacg atgggggatc gtgtggctgt tctctgtgcc
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478
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<211> 159
<212> PRT
<213> Homo sapiens
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Xaa Asp Pro Lys Asp Arg Asp Ile Ala Met Val Phe Gln Asn Tyr Ala
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Leu Tyr Pro His Met Thr Val Ala Asp Asn Met Gly Phe Ala Leu Lys
          . 20
Leu Ala Lys Val Asp Lys Lys Glu Ile Arg Arg Arg Val Glu Glu Ala
                            40
Ala Glu Leu Leu Asp Leu Thr Asp Tyr Leu Asp Arg Lys Pro Lys Ala
                        55
Leu Ser Gly Gly Gln Arg Gln Arg Val Ala Met Gly Arg Ala Ile Val
                    70
                                        75
Arg Ser Pro Arg Val Phe Leu Met Asp Glu Pro Leu Ser Asn Leu Asp
                                    90
Ala Arg Leu Arg Val Arg Thr Arg Ala Gln Ile Ala Glu Leu Gln Arg
                                105
            100
Arg Leu Gly Thr Thr Thr Val Tyr Val Thr His Asp Gln Val Glu Ala
                            120
Met Thr Met Gly Asp Arg Val Ala Val Leu Cys Ala Gly Lys Leu Gln
                                           . 140
                        135
Gln Val Asp Thr Pro Arg Asn Leu Phe Asp His Pro Ala Asn Ala
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145
 <210> 2087
 <211> 731
 <212> DNA
 <213> Homo sapiens
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tegtacegtg gtgattagea getageegag gegetageeg ceatataaga tteccaaatt
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 aaaagaaaaa gcattgcgtc ggccaagaat tgctgtcgct gctgcaacgg ctactgcgct
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731
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Met Ala Lys Glu Gly Val Leu Leu Ile Asn His His Lys Leu Lys Ala
Leu Ile Gly Ala Gln Val Gly Leu Leu Thr Asp Ala Lys Ile Gln Arg
Ala Ala Ala Val Asp Leu Gly Ile Lys Ala Thr Leu Ala Ala Thr
Ile Ile Pro Asn Ala Leu His Ser Ala Ala Phe Lys Asp Ala Val Val
                        55
Ala Asn Leu Val Ala Ala Gly Leu Thr Arg Ser Trp Gln Arg Leu Arg
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Leu Ser Pro Leu Pro Gln Leu Arg Ser Ile Pro Leu Ser Gly Arg Ser
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                                     90
Gln Arg Leu Arg Pro Leu Arg Leu Arg
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                                105
<210> 2089
<211> 315
<212> DNA
<213> Homo sapiens
<400> 2089
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ttcgacaccg accacttcga ggggtacgag cgccccgcc tcgtgctgca cgaagtcacc
gatcaacttg gccaagcgtt ccttgtattg gaaggcccag agccggctct cggctgggaa
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tegttggtgg cgtctctcac gagtcttgtc gactctatgg ggatccgtct gaccggcatt
accgattcga tcccg
315
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<211> 105
<212> PRT
<213> Homo sapiens
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Thr Gly Val Asp Gln Ala Gln Leu Arg Asp Ala Met Phe Ser Tyr Leu
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Pro His His Lys Leu Gly Glu Phe Asp Ile Asp Leu Leu Leu Asp His
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Arg Asp Ser Arg Gln Pro Ile Ile Phe Asp Thr Asp His Phe Glu Gly
Tyr Glu Arg Pro Arg Leu Val Leu His Glu Val Thr Asp Gln Leu Gly
                        55
Gln Ala Phe Leu Val Leu Glu Gly Pro Glu Pro Ala Leu Gly Trp Glu
                                         75
Ser Leu Val Ala Ser Leu Thr Ser Leu Val Asp Ser Met Gly Ile Arg
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Leu Thr Gly Ile Thr Asp Ser Ile Pro
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<210> 2091
<211> 322
<212> DNA
<213> Homo sapiens
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tettteetet gtgtgtetet ceatttetgt etetetteet etgtetetet ecatttetgt
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322
<210> 2092
<211> 107
<212> PRT
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<213> Homo sapiens
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 Thr Leu Val His Cys Leu Cys Leu Cys Val Phe Leu Ser Val Ser Leu
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 Cys Leu Cys Leu Cys Val Pro Val Gln Phe Cys Xaa Cys Val Cys Ala
                                 25
 His Leu Ser Leu Cys Leu Cys Xaa Ser Leu Cys Leu Phe Cys Leu Cys
                             40
 Leu Ser Leu Cys Leu Cys Pro Phe Trp Ser Leu Leu Ser Phe Leu Cys
 Val Ser Leu His Phe Cys Leu Ser Ser Ser Val Ser Leu His Phe Cys
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                                         75
 Leu Cys Ser Phe Ser Leu Cys Val Ser Leu Leu Ser Leu Cys Phe Ser
                                     90
 Ala Cys Leu Cys Pro Phe Leu Ser Leu His Ala
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 <211> 324
 <212> DNA
<213> Homo sapiens
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gatgcgatct tggtcggcaa ggatcgaatc ttcaaccggc gcttcctggc gttggctaat
cattacctgt ttgaacctgt agcctgtacg cctgctgctg gctgggagaa gggccaagtt
gagaatcaag ttcgcaacat acqc
324
<210> 2094
<211> 108
<212> PRT
<213> Homo sapiens
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Ala Gly Val Met Gln Thr Ile Lys Val Ala Gln Phe Arg Leu Cys His
                                                         15
Ser Arg Lys Met Phe Val Val Ala Tyr Pro Arg Glu Thr Gln Glu Met
                                25
Val Leu Asp Ala His Asn Arg Ala Phe Ala Phe Phe Gly Gly Val Pro
Gln Arg Val Ile Tyr Asp Asn Leu Lys Thr Ala Val Asp Ala Ile Leu
                        55
Val Gly Lys Asp Arg Ile Phe Asn Arg Arg Phe Leu Ala Leu Ala Asn
```

His Tyr Leu Phe Glu Pro Val Ala Cys Thr Pro Ala Ala Gly Trp Glu

70

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95
               85
                                    90
Lys Gly Gln Val Glu Asn Gln Val Arg Asn Ile Arg
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<212> DNA
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aatgatgaac ctcttgtgct gcaagtgaaa gaagccctcc ccagtgtcct caccacccat
gggaaactgc cggatgcttt ttcggaactg tccgctgggg actcctccgg gctcctcccc
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attetgeagg cecaetegga teegetgetg gggtggaege gt
402
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<211> 134
<212> PRT
<213> Homo sapiens
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Pro Val Thr Asp Gln Glu Glu Ala Asp Asn Met Ile Ala Ser Phe Asp
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Thr Tyr Val Arg Thr Leu Pro Pro Ala Ala Asn Leu Leu Lys Gln
                                25
Phe His Ile Val Asp Val Ala Arg Arg Val Val Gly Val Gly Ser Val
                            40
Gly Thr His Ser Leu Val Leu Leu Ser Gly Pro Asn Asp Glu Pro
                                             60
Leu Val Leu Gln Val Lys Glu Ala Leu Pro Ser Val Leu Thr Thr His
                    70
Gly Lys Leu Pro Asp Ala Phe Ser Glu Leu Ser Ala Gly Asp Ser Ser
                                    90
Gly Leu Leu Pro Asp Asn Leu Asp Lys His Ile Lys Ala Gly Asn Gly
                                105
Tyr Arg Val Val Ala Cys Gln Gln Ile Leu Gln Ala His Ser Asp Pro
                                                 125
                             120
        115
Leu Leu Gly Trp Thr Arg
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 <210> 2097
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 <212> DNA
 <213> Homo sapiens
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<400> 2097

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<213> Homo sapiens
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Pro Pro Pro Glu Ala Glu Gln Ala Trp Pro Gln Ser Ser Gly Glu Glu
                                 25
Glu Leu Gln Leu Gln Leu Ala Leu Ala Met Ser Lys Glu Glu Ala Asp
Gln Val Leu Gly Val Gln Leu Gly Leu Ser Val Arg His Pro Pro Pro
Arg Leu Thr Ser Gly Ser Leu Pro Ala Arg Arg Gly Pro Gly Pro His
                                         75
Cys Arg Cys Ser Thr Cys Cys His Ser Ser Pro Pro Gln Ser Cys Leu
                85
                                    90
Ile Leu Thr Pro Pro Ser Leu Cys Val Ser Leu Ser Ala Cys Pro His
                                105
                                                     110
Trp Phe Arg Asp Pro Gln Pro Leu Phe Ile Arg Leu Tyr Leu Thr Leu
                            120
'Ala Leu Pro Leu Thr Leu Pro Leu Ala Pro Pro Val Met Pro Leu Thr
                        135
                                            140
Leu Ser Leu Pro Gln Pro Pro Ser Cys Gly Pro Glu Asp Asp Ala Gln
                    150
                                        155
Leu Gln Leu Ala Leu Ser Leu Ser Arg Glu Glu His Asp Lys Val Arg
                                    170
Ala Ala Ser Leu Ser Leu Pro Leu Pro Gly Ala Pro Leu Arg Pro Ala
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Pro Ser Pro Leu Pro Lys Ser Pro Pro Thr Ile Leu Leu Gly Pro Lys
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       195
Pro Thr Gly Ser Arg
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<213> Homo sapiens
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<210> 2100
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<212> PRT
<213> Homo sapiens
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Met Asp Ser Thr Cys Pro Gln Gly Cys Ser Val Glu Ala Val Pro Arg
Ala Ala Val Pro Met Arg Val Pro Cys Pro Leu Pro Asp Ala Asp Ser
                                 25
Thr Cys Pro Arg Gly Ala Gln Trp Arg Gln Cys Pro Gly Leu Leu Cys
                             40
Pro Arg Val Cys Pro Gln Thr Ser Leu Pro Arg His Leu Leu His Asp
                                             60
                        55
Pro Gly Gly Gly Arg Gln Trp Gln Tyr Ser Val Gln Val Ser Ser Glu
                                         75
                    70
Val Ala Gly Ala Trp Leu Arg Pro Cys Leu Thr Pro Thr Ala Ser Ala
                85
Ser Ser Pro Leu Ala His Pro Thr Trp Pro
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            100
<210> 2101
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<212> DNA
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<213> Homo sapiens
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Met Gly Arg Asp Glu Leu Pro Leu Pro Thr Ala Thr Ser Leu Ala Leu
Cys Gly Leu Asn His Asp Lys Asn Glu Leu Leu Ala Ser Leu Leu Ile
                                25
His Leu Asp Glu Leu Leu Thr Val Trp Leu Glu Thr Gly Thr Val Arg
                            40
Asp Gln Tyr Val Ala Arg Cys Asp Thr Ile Gly Thr Pro Val Arg Leu
Thr Phe Asp Pro Glu Ile Val Gly Gly Glu Gly Ala Ile Glu Gly
                    70
                                        75
Ile Gly Val Asp Val Asp Gly Ala Ile Val Val Glu Thr Ser
               85
                                    90
Asp Gly Arg Arg Ser Phe Asn Ala Ala Asp Val His His Leu Arg Thr
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                                105
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Arq
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<213> Homo sapiens
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ggtatcgtcg gatgcggagc ggtcgggtgc cgggttgcgg ctgtgatggc ggccatgggt
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459
<210> 2104
<211> 153
<212> PRT
<213> Homo sapiens
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Xaa Arg Val Thr Tyr Thr Pro Gly Arg Asn Ala Thr Ala Thr Ala Glu
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His Glu Leu Leu Ala Ser Gly Val Trp Glu Gly Asp Ala Tyr Arg Tyr
Asp Gln Val Gly Met Glu Ile Lys Gly Asn Asp Val Gly Ile Val Gly
                        55
Cys Gly Ala Val Gly Cys Arg Val Ala Ala Val Met Ala Ala Met Gly
                                         75
                    70
Ala Thr Val Arg Val Phe Asp Pro Trp Ala Thr Pro Asp Ser Phe Pro
                85
                                     90
Ala Gly Val Met Ala Cys Asp Asp Leu Asp Glu Val Leu Arg Leu Ser
                                105
Arg Ile Leu Thr Leu His Ala Arg Ala Asn Glu Asp Asn Arg His Met
                                                 125
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Asn Cys Ala Arg Gly Ser Leu Val Asp
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<210> 2105
<211> 4057
<212> DNA
<213> Homo sapiens
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2100				tgaggcacat	
2160				aggacagtct	
2220					
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2340				ggaggtggcc	_
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Gln Ser Glu Leu Thr Asn Met Asp Leu Ala Ala Leu Phe Ser Asp Thr
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Pro Ala Asn Ala Ser Gly Ser Ala Gly Gly Ser Asp Glu Ala Leu Asn
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Ser Gly Ile Leu Thr Ile Asp Val Thr Ser Val Ser Ser Ser Leu Gly
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Gly Asn Leu Pro Ala Asn Asn Ser Ser Leu Gly Pro Met Glu Pro Leu
Val Leu Val Ala His Ser Asp Ile Pro Pro Ser Leu Asp Ser Pro Leu
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Val Leu Gly Thr Ala Ala Thr Val Leu Gln Gln Gly Ser Phe Ser Val
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Asp Asp Val Gln Thr Val Ser Ala Gly Ala Leu Gly Cys Leu Val Ala
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                                            140
Leu Pro Met Lys Asn Leu Ser Asp Asp Pro Leu Ala Leu Thr Ser Asn
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Ser Asn Leu Ala Ala His Ile Thr Thr Pro Thr Ser Ser Ser Thr Pro
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Arg Glu Asn Ala Ser Val Pro Glu Leu Leu Ala Pro Ile Lys Val Glu
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Pro Asp Ser Pro Ser Arg Pro Gly Ala Val Gly Gln Gln Glu Gly Ser
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His Gly Leu Pro Gln Ser Thr Leu Pro Ser Pro Ala Glu Gln His Gly
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Pro Ala Lys Arg Arg Asn Glu Thr Ser Phe Leu Pro Ala Lys Lys Thr
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Ser Val Lys Glu Thr Gln Arg Thr Phe Lys Gly Asn Ala Gln Lys Met
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Phe Ser Pro Lys Lys His Ser Val Ser Thr Ser Asp Arg Asn Gln Glu
Glu Arg Gln Cys Ile Lys Thr Ser Ser Leu Phe Lys Asn Asn Pro Asp
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Ile Pro Glu Leu His Arg Pro Val Val Lys Gln Val Gln Glu Lys Val
                            120
Phe Thr Ser Ala Ala Phe His Glu Leu Gly Leu His Pro His Leu Ile
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                                            140
Ser Thr Ile Asn Thr Val Leu Lys Met Ser Ser Met Thr Ser Val Gln
                    150
                                        155
Lys Gln Ser Ile Pro Val Leu Leu Glu Gly Arg Asp Ala Leu Val Arg
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                                    170
Ser Gln Thr Gly Ser Gly Lys Ile Leu Ala Tyr Cys Ile Pro Val Val
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Gln Ser Leu Gln Ala Met Glu Ser Lys Ile Gln Arg Ser Asp Gly Pro
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Gly Thr Ser Phe Lys His Met Leu Ser
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                    230
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Leu Phe Met Pro Ile Lys Leu Val Pro Lys Gln Phe Glu Gly Leu Val
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Glu Arg Val Arg Ser Ala Leu Glu Arg Leu Arg Ala Gln Glu Arg Ala
Ile Met Gln Leu Cys Val Arg Asp Ala Arg Met Pro Arg Ala Asp Phe
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180
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PCT/US00/08621

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gageetgeed	tgtacccate	ctgcagccac	tggagette	cctacaagca	agagatttt
gaactgtgca 420	tcaagagago	: tatcatggag	ctggaaagga	a gtacagggta	ccatttggat
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900	tagactttgc		•		
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Ser Phe Asn Ile Ala Ser Pro Ala Ser Gln Ala Trp Ile Leu His Phe
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Cys Gln Lys Leu Arg Asn Gln Thr Phe Phe Tyr Gln Thr Asp Glu Gln
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Asp Phe Thr Ser Cys Phe Ile Glu Thr Phe Lys Gln Trp Met Glu Asn
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Gln Asp Cys Asp Glu Pro Ala Leu Tyr Pro Cys Cys Ser His Trp Ser
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Phe Pro Tyr Lys Gln Glu Ile Phe Glu Leu Cys Ile Lys Arg Ala Ile
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Met Glu Leu Glu Arg Ser Thr Gly Tyr His Leu Asp Ser Lys Thr Pro
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Gly Pro Arg Phe Asp Ile Asn Asp Thr Ile Arg Ala Val Leu Glu
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                    150
Phe Gln Ser Thr Tyr Leu Phe Thr Leu Ala Tyr Glu Lys Met His Gln
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Phe Tyr Lys Glu Val Asp Ser Trp Ile Ser Ser Glu Leu Ser Ser Ala
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                               185
            180
Pro Glu Gly Leu Ser Asn Gly Trp Phe Val Ser Asn Leu Glu Phe Tyr
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Asp Leu Gln Asp Ser Leu Ser Asp Gly Thr Leu Ile Ala Met Gly Leu
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 Ser Val Ala Val Ala Phe Ser Val Met Leu Leu Thr Thr Trp Asn Ile
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225 230 235	240
Ile Ile Ser Leu Tyr Ala Ile Ile Ser Ile Ala Gly Thr Ile	
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260 265 270	
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His Tyr Gly Val Ala Tyr Arg Leu Ala Pro Asp Pro Asp Arg 290 295 300	Glu Gly
Lys Val Ile Phe Ser Leu Ser Arg Val Gly Ser Ala Met Ala 305 310 315	Met Ala 320
Ala Leu Thr Thr Phe Val Ala Gly Ala Met Met Ile Pro Ser 325 330	
Leu Ala Tyr Thr Gln Leu Gly Thr Phe Met Met Leu Ile Met 340 345 350	
Ser Trp Ala Phe Ala Thr Phe Phe Gln Cys Met Cys Arg	Cvs Leu
355 360 365	
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Cys Ser Ala Phe Ser His Ala Leu Ser Thr Ser Pro Ser Asp	Lys Gly
385 390 395	400
Gln Ser Lys Thr His Thr Ile Asn Ala Tyr His Leu Asp Pro 405 410	Arg Gly
Pro Lys Ser Glu Leu Glu His Glu Phe Tyr Glu Leu Glu Pro 420 425 430	Leu Ala
Ser His Ser Cys Thr Ala Pro Glu Lys Thr Thr Tyr Glu Glu 435 440 445	Thr His
Ile Cys Ser Glu Phe Phe Asn Ser Gln Ala Lys Asn Leu Gly 450 450 460	Met Pro
Val His Ala Ala Tyr Asn Ser Glu Leu Ser Lys Ser Thr Glu	Ser Asn
465 470 475	480
Thr Gly Ser Ala Leu Leu Gln Pro Pro Leu Glu Gln His Thr 485 490	
His Phe Phe Ser Leu Asn Gln Arg Cys Ser Cys Pro Asp Ala 500 505 510	
His Leu Asn Tyr Gly Pro His Ser Cys Gln Gln Met Gly Asp 515 520 525	Cys Leu
Cys His Gln Cys Ser Pro Thr Thr Ser Ser Phe Val Gln Ile	Gln Asn
Gly Val Ala Pro Leu Lys Ala Thr His Gln Ala Val Glu Gly	Phe Val
545 550 555	560
His Pro Ile Thr His Ile His His Cys Pro Cys Leu Gln Gly 7	
Lys Pro Ala Gly Met Gln Asn Ser Leu Pro Arg Asn Phe Phe 1 580 585 590	
Pro Val Gln His Ile Gln Ala Gln Glu Lys Ile Gly Lys Thr 7	Asn Val
His Ser Leu Gln Arg Ser Ile Glu Glu His Leu Pro Lys Met	Ala Glu
. 020	Rhom Co
Pro Ser Ser Phe Val Cys Arg Ser Thr Gly Ser Leu Leu Lys 7 625 630 635	
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645 650 Ser Asn Leu Glu Ser Ser Gly Gly Thr Glu Asn Lys Ala Gly G	555

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665
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Val Glu Leu Ser Leu Ser Gln Thr Asp Ala Ser Val Asn Ser Glu His
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Phe Asn Gln Asn Glu Pro Lys Val Leu Phe Asn His Leu Met Gly Glu
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Ala Gly Cys Arg Ser Cys Pro Asn Asn Ser Gln Ser Cys Gly Arg Ile
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                    710
Val Arg Val Lys Cys Asn Ser Val Asp Cys Gln Met Pro Asn Met Glu
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Gly Gly Pro Pro Ala Pro Ala Ala His Arg Leu Gly Met Glu Met Pro
                            40
Ser Pro Gly Ser Ser Arg Gln Arg Thr Arg Glu Met Thr Thr Glu Arg
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His Thr Pro Ala Pro Ser His Ser Ser Pro Gln Ile Ser Pro Ser Asp
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                    70
Ala Ala Val Arg Phe Asn Val Ser Phe Leu Phe Arg Ala Gly Gly Cys
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85
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Gly Leu Gly Gly Leu Gln Gly Pro Lys Thr Ser Arg Trp Ala Gln Glu
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                                 105
Gly Asp Arg His Pro Pro Phe Gln Ile Leu Glu Tyr Pro Glu Ala Pro
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Ser Gly Arg Glu Gly Gly Val Ser Gly Glu Pro Ala Pro Arg Pro Glu
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Thr Arg
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                                25
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Arg Ile Arg Gln Leu Glu
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Leu Leu Glu Ala Ser Glu Phe Leu Ala Glu Asp Ser Gln Glu Lys
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Phe Trp Asn Phe Val Glu Ala Ser Gln Asn Ile Gly Ser Ser Asp His
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                    70
Asp Gly Thr Asp Tyr Ser Tyr Tyr His Ala Ile Leu Glu Ala Ala Phe
Gln Phe Leu Ser Pro Leu Gln Gln Asn Leu Phe Lys Phe Cys Leu Ser
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Leu His Ala
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Phe Tyr Ile Leu Val Val Arg Ser Gly Gly Ser Phe Val Thr Lys Tyr
Asn Lys Thr Asn Cys Gln Phe Tyr Val Asp Asn Leu Tyr Tyr Ser Thr
                        55
Asp Tyr Glu Phe Leu Val Ser Phe His Asn Gly Val Tyr Glu Gly Asp
                    70
Ser Val Ile Arg Asn Glu Ser Thr Asn Phe Asn Ala Lys Ala Leu Ile
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Ile Phe Leu Val Phe Leu Ile Ile Val Thr Ser Ile Ala Leu Leu Val
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                                 105
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Ala Ala Thr Gly Tyr Asp Ala Ile Ser Leu Gln Pro Asn Ala Gly Ser
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Gln Gly Glu Tyr Ala Gly Leu Leu Ala Ile Arg Ala Tyr His Gln Ser
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Arg Gly Asp Glu Arg Arg Asp Ile Cys Leu Ile Pro Ser Ser Ala His
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Gly Thr Asn Pro Ala Thr Ala Asn Met Ala Gly Met Arg Val Val
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                85
Thr Ala Cys Asp Ala Arg Gly Asn Val Asp Ile Glu Asp Leu Arg Ala
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Asn Thr Arg Gly Ser Arg Leu Val Leu Lys Ala Ala Glu Asp Ala Ala
                             40
Pro Pro Ala Val Thr Val Glu Ala Ala Lys Glu Glu Lys Pro Lys Pro
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Pro Pro Ile Gly Pro Lys Arg Gly Ala Lys Val Arg Ile Leu Arg Lys
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Glu Ser Tyr Trp Phe Lys Gly Val Gly Ser Val Val Thr Val Asp
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atgeagtact geatgatgea acaggggett geeagettga tggegtgtee gteeetqatq
ctgcagcaac tgttggcctt accgcttcag acgatgccag tgatgatgcc acagatgatg
acgcctaaca tgatgtcacc attgatgatg ccgagcatga tgtcaccaat ggtcttgccg
agcatgatgt cgcaaatgat gatgccacaa tgtcactgcg acgccgtctc gcagattatg
ctgcaacage agttaccatt catgttcaac ccaatggcca tgacgattcc acccatgttc
ttacagcaac cctttgttgg tgctgcattc taga
454
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<211> 150
<212> PRT
<213> Homo sapiens
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Met Ala Ala Lys Met Leu Ala Leu Phe Ala Leu Leu Ala Leu Cys Ala
Ser Ala Thr Ser Ala Thr His Ile Pro Gly His Leu Ser Pro Val Met
Pro Leu Gly Thr Met Asn Pro Cys Met Gln Tyr Cys Met Met Gln Gln
Gly Leu Ala Ser Leu Met Ala Cys Pro Ser Leu Met Leu Gln Gln Leu
                        55
Leu Ala Leu Pro Leu Gln Thr Met Pro Val Met Met Pro Gln Met Met
                                        75
Thr Pro Asn Met Met Ser Pro Leu Met Met Pro Ser Met Met Ser Pro
                85
                                    90
Met Val Leu Pro Ser Met Met Ser Gln Met Met Pro Gln Cys His
            100
                                105
Cys Asp Ala Val Ser Gln Ile Met Leu Gln Gln Gln Leu Pro Phe Met
                            120
Phe Asn Pro Met Ala Met Thr Ile Pro Pro Met Phe Leu Gln Gln Pro
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Phe Val Gly Ala Ala Phe
145
                    150
<210> 2129
<211> 354
<212> DNA
<213> Homo sapiens
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<400> 2129

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ctcacgccct ttgacaagcg gcgtgatgcg aacggcggtg acggggtggt gcgcatcggg
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gtccatgatg aacggcctaa taccgtcctt cgtatctggg gcggcggccc agacgagaat
cccctcaagg tettggctcg ccgtcttgtc ccggacggtt cggtggagtt tcgcggtgcc
attgatcatt ctgaggtcag aaatgccttg ggtagtttgg acatctttgc cgcc
<210> 2130
<211> 118
<212> PRT
<213> Homo sapiens
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Thr Arg Asp Leu Val Asn Lys Pro Ile Ser Ile Thr Pro Phe Gly Val
Asp Thr Glu Ile Leu Thr Pro Phe Asp Lys Arg Arg Asp Ala Asn Gly
                                25
Gly Asp Gly Val Val Arg Ile Gly Thr Ile Lys Ala Leu His Ser Lys
Tyr Gly Ile Gly Glu Leu Ile Arg Ala Phe Ser Arg Val His Asp Glu
                                            60
Arg Pro Asn Thr Val Leu Arg Ile Trp Gly Gly Gly Pro Asp Glu Asn
                                        75
Pro Leu Lys Val Leu Ala Arg Arg Leu Val Pro Asp Gly Ser Val Glu
Phe Arg Gly Ala Ile Asp His Ser Glu Val Arg Asn Ala Leu Gly Ser
            100
                                105
Leu Asp Ile Phe Ala Ala
        115
<210> 2131
<211> 324
<212> DNA
<213> Homo sapiens
<400> 2131
geategegge cattggttat gtgtgeetat tecattggtt atgtggaagg ttgggateag
ccagacagtc attatgatgg tttgttacag ctgggcgagt ggggctttcg aatcaatgac
120
ctgatgaaga cggtagaggg cgcggcaggg tgcattgagt attatgaaat gctcaacgaa
180
caacgccccg acttgtctta tgacatagac ggtattgttt ataaagttga tcagattgac
ctgcaagaag agcttggttt tattgctcgt gcgccacgct gggcaattgc tcgaaaattt
300
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acgcgtgact tggtgaacaa acccatatcc atcaccccct tcggtgttga tacggaaata

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cctgctcaag aagaagttac gcgt
 324
 <210> 2132
 <211> 108
 <212> PRT
 <213> Homo sapiens
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Ala Ser Arg Pro Leu Val Met Cys Ala Tyr Ser Ile Gly Tyr Val Glu
                                     10
Gly Trp Asp Gln Pro Asp Ser His Tyr Asp Gly Leu Leu Gln Leu Gly
                                 25
Glu Trp Gly Phe Arg Ile Asn Asp Leu Met Lys Thr Val Glu Gly Ala
Ala Gly Cys Ile Glu Tyr Tyr Glu Met Leu Asn Glu Gln Arg Pro Asp
                         55
Leu Ser Tyr Asp Ile Asp Gly Ile Val Tyr Lys Val Asp Gln Ile Asp
                     70
Leu Gln Glu Glu Leu Gly Phe Ile Ala Arg Ala Pro Arg Trp Ala Ile
Ala Arg Lys Phe Pro Ala Gln Glu Glu Val Thr Arg
<210> 2133
<211> 292
<212> DNA
<213> Homo sapiens
<400> 2133
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gtggctgtct ttagaggacc cggcgaactt ttcctgcttt ttcccacttg ctccatcaca
tacatcacat caccaacacc catcacatac atacacagtc atgaacggcc atcaggccac
accagattac atcgctgtgg atccaaccct gcattttcct gcccctcctt tactgcgagt
gtcacctcta cccggaaagg tcttcaacct ccaagtttcc cagtaattta tt
292
<210> 2134
<211> 93
<212> PRT
<213> Homo sapiens
<400> 2134
Met Val Leu His Asp Met Asn Lys Phe Phe Leu Thr Leu Asn Ser Leu
Val Ala Val Phe Arg Gly Pro Gly Glu Leu Phe Leu Leu Phe Pro Thr
Cys Ser Ile Thr Tyr Ile Thr Ser Pro Thr Pro Ile Thr Tyr Ile His
                            40
Ser His Glu Arg Pro Ser Gly His Thr Arg Leu His Arg Cys Gly Ser
```

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```
60
                        55
   50
Asn Pro Ala Phe Ser Cys Pro Ser Phe Thr Ala Ser Val Thr Ser Thr
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                    70
Arg Lys Gly Leu Gln Pro Pro Ser Phe Pro Val Ile Tyr
                85
<210> 2135
<211> 439
<212> DNA
<213> Homo sapiens
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acgegtteca ttggtgtgte gaattteaag accgageate tggacgeeat cgaggggee
actecgageg tegaceaaat egagatgeat ecetegttea accaggegae etteegegea
gagetggeeg agegeggeat taacceggag geetggagee egetgggeea gtegaaggae
ctcgacaatc ccgtcctcac cgatatttcc aaggcgactg gaaagacgcc tgcccaggtg
greatteget ggeaectgea gateggeaac gtggtattee ecaagteggt gacaccatea
cgaattgccg agaactttga tgtgttcgat ttcgagctgt ctgacgagca gatcgccgca
attgatggcc tggatcacgg caacaggctc ggtggtgacc cttctaccgc cgacttctga
ttctgcaaca ataaccggt
439
<210> 2136
<211> 139
<212> PRT
<213> Homo sapiens
<400> 2136
Thr Arg Ser Ile Gly Val Ser Asn Phe Lys Thr Glu His Leu Asp Ala
                                     10
Ile Glu Gly Ala Thr Pro Ser Val Asp Gln Ile Glu Met His Pro Ser
                                 25
            20
Phe Asn Gln Ala Thr Phe Arg Ala Glu Leu Ala Glu Arg Gly Ile Asn
Pro Glu Ala Trp Ser Pro Leu Gly Gln Ser Lys Asp Leu Asp Asn Pro
Val Leu Thr Asp Ile Ser Lys Ala Thr Gly Lys Thr Pro Ala Gln Val
                                         75
                     70
Val Ile Arg Trp His Leu Gln Ile Gly Asn Val Val Phe Pro Lys Ser
                                     90
                 85
Val Thr Pro Ser Arg Ile Ala Glu Asn Phe Asp Val Phe Asp Phe Glu
                                 105
Leu Ser Asp Glu Gln Ile Ala Ala Ile Asp Gly Leu Asp His Gly Asn
                                                  125
                             120
Arg Leu Gly Gly Asp Pro Ser Thr Ala Asp Phe
                         135
    130
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 <211> 330
 <212> DNA
 <213> Homo sapiens
 <400> 2137
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 teegggacag agatggetgg eggageetgg ggeegeetgg cetgttactt ggagtteetg
 aagaaggagg agctgaagga gttccagctt ctgctcgcca ataaagcgca ctccaggagc
 tetteeggtg agacaccege teagecagag aagacgagtg geatggaggt ggcetegtae
 ctggtggctc agtatgggga gcagcgggcc tgggacctag ccctccatac ctgggagcag
 atggggctga ggtcactgtg cgcccaagcc
 330
 <210> 2138
 <211> 86
 <212> PRT
 <213> Homo sapiens
<400> 2138
Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu
Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Ala Asn Lys Ala
                                 25
His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr
                             40
Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln
    50
                        55
Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg
                    70
Ser Leu Cys Ala Gln Ala
<210> 2139
<211> 433
<212> DNA
<213> Homo sapiens
<400> 2139
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gtgaacaagc tggcgagtac catcgcccag tacaacgatc agatttccaa agtcaccacc
geogeoggtg coccgaacga cotgotggac cagogcagcg aggoggtgcg coagttgtoc
gagetggteg ggacecaggt ggtecagege ggttegagtt atgacgteta tateggeage
ggtcagcgcc tggtgatggg caacagcacc aacaccctgt ccgcagtgcc gagcaaggac
300
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```
gaccegagee agreggeett geagetggat egeggeacea geacegrega tateacetee
360
acggtgaccg gtggcgagat cggtggtctg ctgcgctatc gcagcgatgt gctcgacccg
tcgatcaacg cgt
433 -
<210> 2140
<211> 144
<212> PRT
<213> Homo sapiens
<400> 2140
Glu Gln Leu Ser Ala Gln Asn Thr Gly Ile Asn Ser Asn Leu Ser Asp
                 5
1
Met Ala Gly Gln Val Asn Lys Leu Ala Ser Thr Ile Ala Gln Tyr Asn
                                25
Asp Gln Ile Ser Lys Val Thr Thr Ala Ala Gly Ala Pro Asn Asp Leu
                            40
Leu Asp Gln Arg Ser Glu Ala Val Arg Gln Leu Ser Glu Leu Val Gly
Thr Gln Val Val Gln Arg Gly Ser Ser Tyr Asp Val Tyr Ile Gly Ser
                                        75
Gly Gln Arg Leu Val Met Gly Asn Ser Thr Asn Thr Leu Ser Ala Val
                85
Pro Ser Lys Asp Asp Pro Ser Gln Ser Ala Leu Gln Leu Asp Arg Gly
                                105
            100
Thr Ser Thr Val Asp Ile Thr Ser Thr Val Thr Gly Gly Glu Ile Gly
                                                 125
                            120
Gly Leu Leu Arg Tyr Arg Ser Asp Val Leu Asp Pro Ser Ile Asn Ala
                        135
    130
<210> 2141
<211> 426
<212> DNA
<213> Homo sapiens
<400> 2141
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gtttatcctt atctttcttt ccgcttgatc aatgatatgg tggataaagg cgaagtgtta
ggtgacccaa ttgcttgtca tgttaaatat cgtaaaggta ttaacaaagg cttgatgaaa
atcetgtcta aaatgggtat ttcaacgatt geetettate gtggtgegea attgtttgaa
geggttggct tggatactaa agtggtcgac ctttgtttca aaggcgttgc aagtcgtatc
aaaggtgctc gttttgaaga tttccagcgt gatcaagcaa cgattgccaa taatgcttgg
aagttacgta aacctattca acagggcggt tatcttaaat acgtacatga ctctgagtat
420
cacgcg
426
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<210> 2142
 <211> 142
 <212> PRT
 <213> Homo sapiens
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Xaa Tyr Pro Cys Ser Asp Pro His Gln Phe Ala Val Leu Leu Gly Phe
Gly Ala Thr Ala Val Tyr Pro Tyr Leu Ser Phe Arg Leu Ile Asn Asp
Met Val Asp Lys Gly Glu Val Leu Gly Asp Pro Ile Ala Cys His Val
                             40
Lys Tyr Arg Lys Gly Ile Asn Lys Gly Leu Met Lys Ile Leu Ser Lys
                         55
Met Gly Ile Ser Thr Ile Ala Ser Tyr Arg Gly Ala Gln Leu Phe Glu
                                         75
Ala Val Gly Leu Asp Thr Lys Val Val Asp Leu Cys Phe Lys Gly Val
                                     90
Ala Ser Arg Ile Lys Gly Ala Arg Phe Glu Asp Phe Gln Arg Asp Gln
Ala Thr Ile Ala Asn Asn Ala Trp Lys Leu Arg Lys Pro Ile Gln Gln
                             120
                                                 125
Gly Gly Tyr Leu Lys Tyr Val His Asp Ser Glu Tyr His Ala
    130
<210> 2143
<211> 1008
<212> DNA
<213> Homo sapiens
<400> 2143
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tgtcatattg tacgcagtat gtcttttcaa cgattcttgg cgggggtggc agccatcttg
cttctcctgc ctactgcgtg cgctgatgat gcgcaggcgc ccgttgtcga taacctcggg
acggtcctca gcccctccaa ctccctcatt cgcgagccgg cgaattcgtc agtcaacggg
acgeteaaga geacatatga gtaceteegg eteategaeg gteaegatet accegaegae
gatggctacg ctcatgatca tctggtcgcg gctttgcgcc cgtatttggt gaatggtgga
360
gacagtegge aggeecacgt cacecaacte atggeggegt catecetgaa aaceeteaac
gegttgteeg acaaggagag ateagaggte gacaaacgta ceegeetgee gaagggetge
atcacgagaa agacggtgat gacggatctg cccatcgcga cgatgaggcg ggagatcggc
ctgtccaacg acgggttgtg cctcacaccg tggaaggtca agacgacttc ttccgaggag
geteggtggg egatgeagge getggeeagt geegaeetat teageaatge taaggaegee
660
```

```
gagaaatggg ggtgggagtc gatctcggac gggtatttgc gccatctcga gacctacagt
720
ggcccgagta cgactatcgc gatggccttg tcggcggcga ataccgtctc tacattgtct
cgttcccagt tgcaacgcat cggcgacagt ctcgcggatg cgccatatcc gaggaaggac
cttggtccgg cgctcattcg caatggaaag ccggtcaagg acaagtgcag tatcgaatcg
gcgtacctgt tgaggtattc cgggaattgg gcgtggtgac atgacggttt cttggcaagg
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<210> 2144
<211> 307
<212> PRT
<213> Homo sapiens
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Met Phe Thr Gly Asp Ala Val Val Ile Val Glu Val Ser Gln Leu Cys
His Ile Val Arg Ser Met Ser Phe Gln Arg Phe Leu Ala Gly Val Ala
Ala Ile Leu Leu Leu Pro Thr Ala Cys Ala Asp Asp Ala Gln Ala
                            40
Pro Val Val Asp Asn Leu Gly Thr Val Leu Ser Pro Ser Asn Ser Leu
Ile Arg Glu Pro Ala Asn Ser Ser Val Asn Gly Thr Leu Lys Ser Thr
                    70
Tyr Glu Tyr Leu Arg Leu Ile Asp Gly His Asp Leu Pro Asp Asp Asp
                                    90
Gly Tyr Ala His Asp His Leu Val Ala Ala Leu Arg Pro Tyr Leu Val
                                                    110
                                105
Asn Gly Gly Asp Ser Arg Gln Ala His Val Thr Gln Leu Met Ala Ala
                            120
Ser Ser Leu Lys Thr Leu Asn Ala Leu Ser Asp Lys Glu Arg Ser Glu
                                            140
                        135
Val Asp Lys Arg Thr Arg Leu Pro Lys Gly Cys Ile Thr Arg Lys Thr
                                        155
                    150
Val Met Thr Asp Leu Pro Ile Ala Thr Met Arg Arg Glu Ile Gly Leu
                                    170
Ser Asn Asp Gly Leu Cys Leu Thr Pro Trp Lys Val Lys Thr Thr Ser
                                                     190
                                185
            180
Ser Glu Glu Ala Arg Trp Ala Met Gln Ala Leu Ala Ser Ala Asp Leu
                                                205
                            200
Phe Ser Asn Ala Lys Asp Ala Glu Lys Trp Gly Trp Glu Ser Ile Ser
                                            220
                        215
Asp Gly Tyr Leu Arg His Leu Glu Thr Tyr Ser Gly Pro Ser Thr Thr
                                        235
Ile Ala Met Ala Leu Ser Ala Ala Asn Thr Val Ser Thr Leu Ser Arg
                                     250
                245
Ser Gln Leu Gln Arg Ile Gly Asp Ser Leu Ala Asp Ala Pro Tyr Pro
                                 265
Arg Lys Asp Leu Gly Pro Ala Leu Ile Arg Asn Gly Lys Pro Val Lys
```

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275
                             280
Asp Lys Cys Ser Ile Glu Ser Ala Tyr Leu Leu Arg Tyr Ser Gly Asn
    290
                         295
                                              300
Trp Ala Trp
305
<210> 2145
<211> 389
<212> DNA
<213> Homo sapiens
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ttatttagct cggcccagcc ttctgctgaa caactaaaat tgattaaaga gtttggttgt
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attigittag accitiggitt aaattatatt catattccaa tigattggga gatgccttct
gctgagcagt gcttattagt tttagatttg attgatcatt tagtgcaaaa tgaaattgtt
360
tggatacatt gcgccaaaaa taaacgcgt
389
<210> 2146
<211> 109
<212> PRT
<213> Homo sapiens
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Met Thr Thr Leu Glu Gln Ser Leu Ser Gln Ile Pro Ala Phe Ser Ile
                                     10
Ile His Glu His Leu Phe Ser Ser Ala Gln Pro Ser Ala Glu Gln Leu
Lys Leu Ile Lys Glu Phe Gly Cys Ser Thr Val Ile Asn Leu Ala Leu
                             40
Thr Asn Ala Ser Asn His Leu Glu Asn Glu Asp Arg Ile Cys Leu Asp
                        55
Leu Gly Leu Asn Tyr Ile His Ile Pro Ile Asp Trp Glu Met Pro Ser
                    70
Ala Glu Gln Cys Leu Leu Val Leu Asp Leu Ile Asp His Leu Val Gln
                                                         95
Asn Glu Ile Val Trp Ile His Cys Ala Lys Asn Lys Arg
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<210> 2147
<211> 235
<212> DNA
<213> Homo sapiens
<400> 2147
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acttgcctcg tcacctggaa tgacttccac tgtacctgcc ctgccaattt cacggggcct
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geggaggeea egtteegega gggteeecee geegegttea gegggeacaa egegt
<210> 2148
<211> 78
<212> PRT
<213> Homo sapiens
<400> 2148
Leu Pro Ala Gly Cys Val Ser Glu Asp Met Cys Ser Pro Asp Pro Cys
1
Phe Asn Gly Gly Thr Cys Leu Val Thr Trp Asn Asp Phe His Cys Thr
Cys Pro Ala Asn Phe Thr Gly Pro Thr Cys Ala Gln Gln Leu Trp Cys
                            40
Pro Gly Gln Pro Cys Leu Pro Pro Ala Thr Cys Val Ala Glu Ala Thr
Phe Arg Glu Gly Pro Pro Ala Ala Phe Ser Gly His Asn Ala
                    70
<210> 2149
<211> 1474
<212> DNA
<213> Homo sapiens
<400> 2149
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greetgetga tggtggetge gaatgatttg cettgacaat agetgaaaaa ceaceatetg
120
caacacgtgg gagtaagact tetectgete tttgccagtg gtetgaggtg atgaaccace
ctggcttggt gtgctgtgtc cagcaaacta caggggtgcc gctggtagtt atggtgaaac
cagacacttt tottatocac gagattaaga otottootgo taaagogaag atocaagaca
tggttgctat taggcacacg gcctgcaatg agcagcagcg gacaacaatg attctgctgt
gtgaggatgg cagcctgcgc atttacatgg ccaacgtgga gaacacctcc tactggctgc
agccatecet geageceage agtgteatea geateatgaa geetgttega aagegeaaaa
cagctacaat cacaaccong cacgtotago caggtgactt tocccattga cttttttgaa
cacaaccage agetgacaga tgtggagttt ggtggtaacg acetectaca ggtetataat
gcacaacaga taaaacaccg gctgaattcc actggcatgt atgtggccaa caccaagccc
660
```

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ggaggettea ceattgagat tagtaacaac aatagcacta tggtgatgae aggeatgegg
 atccagattg ggactcaagc aatagaacgg gccccgtcat atatcgagat cttcggcaga
 actatgcage teaacetgag tegeteacge tggtttgact teecetteae cagagaagaa
 geeetgeagg etgataagaa getgaacete tteattgggg eeteggtgga teeageaggt
 gtcaccatga tagatgctgt aaaaatttat ggcaagacta aggagcagtt tggctggcct
 gatgagcccc cagaagaatt cccttctgcc tctgtcagca acatctgccc ttcaaatctg
 1020
 aaccagagca acggcactgg agatagcgac tcagctgccc ccactacgac cagtggaact
 1080
gtcctggaga ggctggttgt gagttcttta gaagccctgg aaagctgctt tgccgttggc
1140
ccaatcatcg agaaggagag aaacaagaat gctgctcagg agctggccac tttgctgttg
tecetgecag caectgecag tgtecageag cagtecaaga geettetgge cageetgeae
accagccgct cggcctacca cagccacaag gtaactgttc tctcagggaa aggaaattgc
agtgctgaca gggaatcaaa taagttagct cttcattgta aagcaacagc acagcaaagt
1380
aaggtagagg gaggatagca ttcagattag acctacattt tacagagttt ctcctgagaa
attetcaagt gecaetcaaa aetgagggta agee
1474
<210> 2150
<211> 312
<212> PRT
<213> Homo sapiens
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Ser Leu Phe Glu Ser Ala Lys Gln Leu Gln Ser Gln Pro Xaa Thr Ser
Ser Gln Val Thr Phe Pro Ile Asp Phe Phe Glu His Asn Gln Gln Leu
Thr Asp Val Glu Phe Gly Gly Asn Asp Leu Leu Gln Val Tyr Asn Ala
                            40
Gln Gln Ile Lys His Arg Leu Asn Ser Thr Gly Met Tyr Val Ala Asn
                        55
Thr Lys Pro Gly Gly Phe Thr Ile Glu Ile Ser Asn Asn Asn Ser Thr
                                        75
Met Val Met Thr Gly Met Arg Ile Gln Ile Gly Thr Gln Ala Ile Glu
Arg Ala Pro Ser Tyr Ile Glu Ile Phe Gly Arg Thr Met Gln Leu Asn
            100
                                105
Leu Ser Arg Ser Arg Trp Phe Asp Phe Pro Phe Thr Arg Glu Glu Ala
                            120
                                                125
Leu Gln Ala Asp Lys Lys Leu Asn Leu Phe Ile Gly Ala Ser Val Asp
                        135
Pro Ala Gly Val Thr Met Ile Asp Ala Val Lys Ile Tyr Gly Lys Thr
```

```
155
                                                             160
                    150
145
Lys Glu Gln Phe Gly Trp Pro Asp Glu Pro Pro Glu Glu Phe Pro Ser
                                    170
               165
Ala Ser Val Ser Asn Ile Cys Pro Ser Asn Leu Asn Gln Ser Asn Gly
                                                    190
                                185
           180
Thr Gly Asp Ser Asp Ser Ala Ala Pro Thr Thr Thr Ser Gly Thr Val
                            200
Leu Glu Arg Leu Val Val Ser Ser Leu Glu Ala Leu Glu Ser Cys Phe
                                            220
                        215
Ala Val Gly Pro Ile Ile Glu Lys Glu Arg Asn Lys Asn Ala Ala Gln
                                        235
                    230
Glu Leu Ala Thr Leu Leu Leu Ser Leu Pro Ala Pro Ala Ser Val Gln
                                    250
                245
Gln Gln Ser Lys Ser Leu Leu Ala Ser Leu His Thr Ser Arg Ser Ala
                                                    270
                                265
Tyr His Ser His Lys Val Thr Val Leu Ser Gly Lys Gly Asn Cys Ser
                                                285
                            280
        275
Ala Asp Arg Glu Ser Asn Lys Leu Ala Leu His Cys Lys Ala Thr Ala
                                            300
                        295
Gln Gln Ser Lys Val Glu Gly Gly
<210> 2151
<211> 511
<212> DNA
<213> Homo sapiens
<400> 2151
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gtgcatcage geteetttea gttgaceggg ategeegate cattgeggge getggetegt
180
gagetggegg cegaggtgeg ggtgetgtgt ttegatgage tgttegteaa tgacateggt
gacgcgatca ttctcgggcg cctgtttcag gtgatgttcg acgcaggcgt ggtggtggtc
tgcacctcca atctgccgcc ggatcagctg tatgccgacg gcttcaaccg cgaccgcttc
ctgccggcga tcaccgcgat caaacagcac atgcaagtgg tcgcggtgaa tggcgcggaa
gateateget tgeateegg egecategag eagegttaet gggtegetet geeggageag
ggtagcgcgt tgagccaggt gttcgacgcg t
<210> 2152
<211> 170
<212> PRT
<213> Homo sapiens
<400> 2152
Ala Gly Val Tyr Leu Trp Gly Pro Val Gly Arg Gly Lys Thr Trp Leu
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 Met Asp Gln Phe His Gln Ser Leu Xaa Gly Cys Arg Arg Xaa Arg Gln
 His Phe His His Phe Met Gly Trp Val His Gln Arg Ser Phe Gln Leu
                              40
 Thr Gly Ile Ala Asp Pro Leu Arg Ala Leu Ala Arg Glu Leu Ala Ala
                          55
 Glu Val Arg Val Leu Cys Phe Asp Glu Leu Phe Val Asn Asp Ile Gly
 Asp Ala Ile Ile Leu Gly Arg Leu Phe Gln Val Met Phe Asp Ala Gly
                                      90
 Val Val Val Cys Thr Ser Asn Leu Pro Pro Asp Gln Leu Tyr Ala
                                 105
 Asp Gly Phe Asn Arg Asp Arg Phe Leu Pro Ala Ile Thr Ala Ile Lys
                             120
 Gln His Met Gln Val Val Ala Val Asn Gly Ala Glu Asp His Arg Leu
 His Pro Gly Ala Ile Glu Gln Arg Tyr Trp Val Ala Leu Pro Glu Gln
                     150
                                         155
 Gly Ser Ala Leu Ser Gln Val Phe Asp Ala
                 165
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tggagcatat ggccaacttt tcgattcgcg atcaataagc cacaccgctc ccacctttga
tggcattcca agtctgaaat tgatccatct ctaataacaa aaatccccgg gagcccgctt
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caccccggc atgtccttga accttatctg cccgctgacc gcacaggccg tgtgattgtg
attgggcccg gcaaaaccgc acccgccatg gccctcgtcg tcgagaacgg ctggcaaggc
gaagtcaccg geetggtggt caccegetac ggccacggeg cgccgtgcaa aaaaategaa
gtggtcgagg ccgctcaccc ggtgccggat gccgccggcc tggcggtg
528
<210> 2154
<211> 96
<212> PRT
<213> Homo sapiens
<400> 2154
Met Ser Val Asp Pro Gln His Leu Leu Arg Glu Leu Phe Ala Thr Ala
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Ile Asp Ala Ala His Pro Arg His Val Leu Glu Pro Tyr Leu Pro Ala
                                25
Asp Arg Thr Gly Arg Val Ile Val Ile Gly Pro Gly Lys Thr Ala Pro
                            40
Ala Met Ala Leu Val Val Glu Asn Gly Trp Gln Gly Glu Val Thr Gly
Leu Val Val Thr Arg Tyr Gly His Gly Ala Pro Cys Lys Lys Ile Glu
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Val Val Glu Ala Ala His Pro Val Pro Asp Ala Ala Gly Leu Ala Val
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<210> 2155
<211> 297.
<212> DNA
<213> Homo sapiens
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gtgctcagtt tctacttccg tgatgaagtg ctgccctact atgcgggcga cgccgtcgcg
gegegegaac tggeggeeaa tgaetteaaa taetgggage tgatgegaeg egeetgtgeg
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297
<210> 2156
<211> 91
<212> PRT
<213> Homo sapiens
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Met Pro Arg Arg Tyr Phe Glu Ala Leu Leu Gln Glu Phe Gly Pro Asp
Cys Glu Val Leu Thr Val Thr Asp Ser Glu Gly Asn Pro Leu Ser Ser
                                25
Val Leu Ser Phe Tyr Phe Arg Asp Glu Val Leu Pro Tyr Tyr Ala Gly
                            40
Asp Ala Val Ala Ala Arg Glu Leu Ala Ala Asn Asp Phe Lys Tyr Trp
Glu Leu Met Arg Arg Ala Cys Ala Arg Gly Leu Lys Val Phe Asp Tyr
                     70
Gly Arg Ser Lys Gln Gly Thr Gly Ser Tyr Ala
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<210> 2157
<211> 711
<212> DNA
<213> Homo sapiens
<400> 2157
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120
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ctgacgaage ttggcgccgc cgtggtacat aagggcaacg ctttggtcca cgtttccggc
catgoogeag coggagaget gotgtacgog tataacatog tgoggocacg cgctqtqatq
cegatteatg gtgaggtgcg teatettgte getaatgeeg atetggeeaa ageaaceggt
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ggggagetta cegaggacae geteactgat egeegtatee teggtgagga gggattettg
tcagtcgtca ccgtggtcga cacccgctcg gcgtcagtgg tgtctcgccc ggcgatccag
600
gegegtggtt ttgcegaggg cgacteggte ttcgeggaga tcaccgacca gategtcacc
gagctagaga aggcgatggc cggtggtatg gacgataccc accggttgca a
711
<210> 2158
<211> 237
<212> PRT
<213> Homo sapiens
<400> 2158
Xaa Arg Asp Asn Glu Val Val Ile Ile Ser Thr Gly Ser Gln Gly Glu
Pro Leu Ser Ala Leu Ala Arg Ile Ala Asn Arg Glu His Arg Asp Ile
Glu Val Gly Glu Gly Asp Thr Val Leu Leu Ala Ser Ser Leu Ile Pro
                            40
Gly Asn Glu Asn Ala Val Tyr Arg Val Ile Asn Gly Leu Thr Lys Leu
                        55
Gly Ala Ala Val Val His Lys Gly Asn Ala Leu Val His Val Ser Gly
                                        75
His Ala Ala Ala Gly Glu Leu Leu Tyr Ala Tyr Asn Ile Val Arg Pro
                                    90
Arg Ala Val Met Pro Ile His Gly Glu Val Arg His Leu Val Ala Asn
                                105
Ala Asp Leu Ala Lys Ala Thr Gly Val Asp Glu Asn Asn Val Val Leu
                            120
                                                125
Val Glu Asp Gly Gly Val Ile Asp Leu Val Asp Gly Val Pro Arg Val
                        135
                                            140
Val Gly Lys Val Asp Ala Ser Tyr Ile Leu Val Asp Gly Ser Gly Val
                    150
Gly Glu Leu Thr Glu Asp Thr Leu Thr Asp Arg Ile Leu Gly Glu
                                    170
Glu Gly Phe Leu Ser Val Val Thr Val Val Asp Thr Arg Ser Ala Ser
```

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185
           180
Val Val Ser Arg Pro Ala Ile Gln Ala Arg Gly Phe Ala Glu Gly Asp
                            200
Ser Val Phe Ala Glu Ile Thr Asp Gln Ile Val Thr Glu Leu Glu Lys
                                            220
                       215
Ala Met Ala Gly Gly Met Asp Asp Thr His Arg Leu Gln
                   230
<210> 2159
<211> 322
<212> DNA
<213> Homo sapiens
<400> 2159
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ggcagcagct ccaggggggg cctgggaggg ctttgtgcag aagaagcctg tttccttcta
cctgtttgga aaagttgtct ctgcagatgg tgggtgagag ttcgctgcca gggccactgt
cttccctgcc ctgcggacac ttcttcccca ccttcctaaa gctgtgggag acctggagcc
gtggagcatc aatggctctt tgactcagga atcttaaaaa atcacaccct ggggctacca
tgggggcctt ctggttctcc tt
322
<210> 2160
<211> 100
<212> PRT
<213> Homo sapiens
<400> 2160
Met Val Ala Pro Gly Cys Asp Phe Leu Arg Phe Leu Ser Gln Arg Ala
                                    10
1
Ile Asp Ala Pro Arg Leu Gln Val Ser His Ser Phe Arg Lys Val Gly
            20
Lys Lys Cys Pro Gln Gly Arg Glu Asp Ser Gly Pro Gly Ser Glu Leu
                            40
Ser Pro Thr Ile Cys Arg Asp Asn Phe Ser Lys Gln Val Glu Gly Asn
                                             60
                        55
Arg Leu Leu His Lys Ala Leu Pro Gly Arg Pro Trp Ser Cys Cys
                                        75
                    70
Pro Ala Ser Trp Cys Pro Phe Thr Arg Cys Arg Leu Ser Arg Gly Trp
                                                         95
                                    90
Ser Val Leu Ala
            100
<210> 2161
<211> 1070
<212> DNA
<213> Homo sapiens
<400> 2161
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PCT/US00/08621

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 ccagggcata aggttttgct gtccaggaag ctttgttgga aaaatgttag aagtaatggg
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gtggcaagaa tcctatgaaa gtgtaggcag atctgagagc acagacaaat acagtggaga
660
atgtggcaca gggcagaggg cagtgggctg agcagcgagt gcccatgggg aggggagtat
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acacagaaga tatagcagca tgattctctg gggcaaaatg aggaagaaag gaatggaaga
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ggggggtaaa ggaaccattc ttggatcaag gttatgatgg aataagaagg aagagagagc
960
tggctagctg agtaaaggac catcgtataa aacagacaaa agttaagact agatggagtg
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1070
<210> 2162
<211> 145
<212> PRT
<213> Homo sapiens
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Met Val Leu Tyr Ser Ala Ser Gln Leu Ser Leu Pro Ser Tyr Ser Ile
                                    10
Ile Thr Leu Ile Gln Glu Trp Phe Leu Tyr Pro Pro Val Asn Thr Cys
            20
Leu Ser Ser His Pro Leu Thr Ser Ala Gly Thr Leu His Phe Leu
Leu Pro Phe Leu Ser Ser Phe Cys Pro Arg Glu Ser Cys Cys Tyr
   50
                        55
Ile Phe Cys Val Pro Pro Ser Phe Ser Cys His Leu Cys Val Ile Leu
65
Arg Asp Ser Met Gly Ser Ser Gly Tyr Ser Pro Pro His Gly His Ser
```

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95
                                    90
                85
Leu Leu Ser Pro Leu Pro Ser Ala Leu Cys His Ile Leu His Cys Ile
                                105
            100
Cys Leu Cys Ser Gln Ile Cys Leu His Phe His Arg Ile Leu Ala Thr
                            120
Gly Leu Pro Phe Met Pro Ile Pro Phe Ser Leu Ser His Leu Ser Pro
                        135
                                            140
   130
Tyr
145
<210> 2163
<211> 657
<212> DNA
<213> Homo sapiens
<400> 2163
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ggeetecete caatecacet ecaettecta cacecacee getetecece eccecettt
tggttccggg ttggaaggtt gggtgaaatg ggaaccgaat accaatttca cccgggaacc
agtaatgccc atgataaccg ccaagttggg accgaagttg ggatccataa gtacgggcgg
ccagtggggt ggaattgggt taageceeet eccageettt eteegaeege gtgeteegte
agacatgcca agaggetete tetecaggag agecacetgt gaaacecace eggeatgete
ctcccaccac tgtgcacaga cgagtgcctg ggctccagag agggagggag ctgaaggcct
cagacaggag teegteeegt ecagteecat cateecaaga aacateegge eegacteeet
gcagetecat ggeteaacaa ggtgeggatg cetgetggae etggetgett tecatecaae
tttgatccct tccccaagag gaagagtgct acctagggac aagtgtggtg cgcacaggca
tgcagcctgg tetettgete aggeggettg cgcagattee tagaggaate tgcageg
<210> 2164
<211> 152
<212> PRT
<213> Homo sapiens
<400> 2164
Met Pro Met Ile Thr Ala Lys Leu Gly Pro Lys Leu Gly Ser Ile Ser
Thr Gly Gly Gln Trp Gly Gly Ile Gly Leu Ser Pro Leu Pro Ala Phe
                                 25
Leu Arg Pro Arg Ala Pro Ser Asp Met Pro Arg Gly Ser Leu Ser Arg
                             40
Arg Ala Thr Cys Glu Thr His Pro Ala Cys Ser Ser His His Cys Ala
Gln Thr Ser Ala Trp Ala Pro Glu Arg Glu Gly Ala Glu Gly Leu Arg
```

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65
                     70
                                          75
                                                              ឧ೧
 Gln Glu Ser Val Pro Ser Ser Pro Ile Ile Pro Arg Asn Ile Arg Pro
 Asp Ser Leu Gln Leu His Gly Ser Thr Arg Cys Gly Cys Leu Leu Asp
                                 105
 Leu Ala Ala Phe His Pro Thr Leu Ile Pro Ser Pro Arg Gly Arg Val
                             120
 Leu Pro Arg Asp Lys Cys Gly Ala His Arg His Ala Ala Trp Ser Leu
                         135
                                             140
 Ala Gln Ala Ala Cys Ala Asp Ser
 145
                     150
 <210> 2165
 <211> 962
 <212> DNA
 <213> Homo sapiens
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gecegaggge cegeegtgaa ettattgtgt egtettatgg aagaaaagte acteggaagt
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acceptaaatc accecagege ctcatecece gaatctgttc gecatetget gtcgcccctg
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cgcttaaggc atcaccccac tagactgacc gaagtctcgc cgagggaggc tagggaggct
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gacgtetteg acgtggegee ceggtecatg accegeaaga teteettgca ceagacagte
gagetegtee geaceaegat tgaegtegtt gaggeaeaaa ttgagaeega aatgeeaege
ggtgatcgcc aagtgctgcg cactgccatc gttcactact cccgcgaggt ggccttcgcc
720
geogeogagg titacgegeg ageogeogaa egtegeggta eetgggatga aegtetggaa
780
tecetegteg ttgatgeegt egtgegagee gaegeegatg aacageteat etegegaget
totactotog gotggogoco gggcatcaac ototgogtog ttgtogggog ggccccgacg
accgagcatg aactccacgt gctgcgacgt gatggagaac gcatgcagat gacggtgcta
960
gc
962
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<211> 239
<212> PRT
<213> Homo sapiens
<400> 2166
Val Ala Arg Asn Asp Ile Gly Thr Thr Ser Thr Arg Arg Ile Gly Ser
                5
Gly Arg Thr Ser Ser Thr Gly Arg Thr Val Val Ser Ser Asp Arg Thr
                                25
Arg Arg Ala Ile Ala Lys Arg Leu Met Ala Arg Thr Ser Ala Met Thr
                            40
Thr Ala Thr Leu Glu Glu Met Gly Arg Arg His Ser Trp Phe Arg Asp
Leu Ser Ala Glu Glu Arg Ser Trp Ile Ser Ile Val Ala Arg Ser Gly
                    70
Ile Asp Gly Phe Val Gln Trp Phe Ala Asp Asp Asp Ala Glu Pro Tyr
                                    90
Ser Pro Thr Asp Val Phe Asp Val Ala Pro Arg Ser Met Thr Arg Lys
                                105
Ile Ser Leu His Gln Thr Val Glu Leu Val Arg Thr Thr Ile Asp Val
                            120
Val Glu Ala Gln Ile Glu Thr Glu Met Pro Arg Gly Asp Arg Gln Val
                                            140
                        135
Leu Arg Thr Ala Ile Val His Tyr Ser Arg Glu Val Ala Phe Ala Ala
                                        155
                    150
Ala Glu Val Tyr Ala Arg Ala Ala Glu Arg Arg Gly Thr Trp Asp Glu
                                    170
                165
Arg Leu Glu Ser Leu Val Val Asp Ala Val Val Arg Ala Asp Ala Asp
                                185
Glu Gln Leu Ile Ser Arg Ala Ser Thr Leu Gly Trp Arg Pro Gly Ile
                            200
Asn Leu Cys Val Val Val Gly Arg Ala Pro Thr Thr Glu His Glu Leu
                                             220
                        215
His Val Leu Arg Arg Asp Gly Glu Arg Met Gln Met Thr Val Leu
                    230
225
<210> 2167
 <211> 325
 <212> DNA
 <213> Homo sapiens
 <400> 2167
accggtgcag tttgtgaggg gttggtgacg cccgatcggg aggttcacgc cgtcacggcg
 catecacatt atdeegactg gaagateteg ceaggttacg gacagtggte gegtagegaa
 cagategaca gtgtgactgt gacgegagte agacaetteg teeegeggeg teecaeggeg
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 tgcgctgatc tcccacagca taccc
 325
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<210> 2168
 <211> 108
 <212> PRT
 <213> Homo sapiens
 <400> 2168
 Thr Gly Ala Val Cys Glu Gly Leu Val Thr Pro Asp Arg Glu Val His
                                      10
 Ala Val Thr Ala His Pro His Tyr Pro Asp Trp Lys Ile Ser Pro Gly
             20
                                 25
 Tyr Gly Gln Trp Ser Arg Ser Glu Gln Ile Asp Ser Val Thr Val Thr
                             40
 Arg Val Arg His Phe Val Pro Arg Arg Pro Thr Ala Ile Leu Arg Ala
Val Ser Glu Val Thr Phe Gly Leu Arg Leu Cys Ala Val Arg Trp Arg
65
                                         75
Ser Thr Ala Ala Ile Val Ala Val Ser Pro Ala Leu Leu Ser Thr Arg
                                     90
Ser Arg Gly Ser Cys Ala Asp Leu Pro Gln His Thr
<210> 2169
<211> 309
<212> DNA
<213> Homo sapiens
<400> 2169
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ggggaggccc tgtccaccct cgtcgtcaat aagatccgcg gtaccttcag ctcggtggca
gtcaaggcgc ccggcttcgg tgaccgccgc aaggcaatgc tgcaggacat cgccaccctc
accggtggtc aggtcgtcgc tcccgaggtt gggctcaagc tcgaccaggt gggcctcgag
300
gttcagggc
309
<210> 2170
<211> 103
<212> PRT
<213> Homo sapiens
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Glu Asp Ala Tyr Val Leu Ile Thr Gln Gly Lys Ile Ser Ala Ile Ala
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Asp Val Leu Pro Ile Leu Glu Lys Val Val Lys Ala Gly Lys Pro Leu
Leu Val Ile Ala Glu Asp Ile Asp Gly Glu Ala Leu Ser Thr Leu Val
Val Asn Lys Ile Arg Gly Thr Phe Ser Ser Val Ala Val Lys Ala Pro
```

```
60
                       55
Gly Phe Gly Asp Arg Arg Lys Ala Met Leu Gln Asp Ile Ala Thr Leu
                                        75
Thr Gly Gly Gln Val Val Ala Pro Glu Val Gly Leu Lys Leu Asp Gln
               85
                                    90
Val Gly Leu Glu Val Gln Gly
           100
<210> 2171
<211> 518
<212> DNA
<213> Homo sapiens
<400> 2171
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catteagetg tggtagtgeg taccagaaaa ggtgtaegte gteeegatgg ttetgttatt
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gcgccagaag tactgtaagg aaccgaaaat ggcagcaaaa ataaaacgtg acgatgaagt
aattgttatt gccggtaaag ataaaggtaa aactgggaaa gtttctcaag ttttaactaa
cggtaaagta attattgaag gtgtaaatgt tcaaaagaaa caccaaaaac caaaccctca
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518
<210> 2172
<211> 105
<212> PRT
<213> Homo sapiens
<400> 2172
Arg Val Met Cys Ile Lys Val Leu Gly Gly Ser His Arg Arg Tyr Ala
Ala Ile Gly Asp Ile Ile Lys Val Ser Val Lys Glu Ala Ile Pro Arg
                                25
            20
Gly Lys Ile Lys Lys Gly Asn Val His Ser Ala Val Val Arg Thr
Arg Lys Gly Val Arg Arg Pro Asp Gly Ser Val Ile Arg Phe Asp Arg
Asn Ala Ala Val Ile Leu Asn Ala Asn Asn Gln Pro Val Gly Thr Arg
                                        75
Ile Phe Gly Pro Val Thr Arg Glu Leu Arg Asn Glu Asn Phe Met Lys
                                    90
                85
Ile Val Ser Leu Ala Pro Glu Val Leu
                                105
            100
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 <211> 475
  <212> DNA
 <213> Homo sapiens
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 geatttettg tatectegte atgegtttet ecceatgeae acacattate geetttgeae
 180 -
 ccgcagggac gcatggaata cctcgtgaaa tggaagggat ggtcgcagaa gtacagcaca
 tgggaaccgg aggaaaacat cctggatgct cgcttgctcg cagcctttga ggaaagggaa
 agagagatgg agctctatgg ccccaaaaag cgtggaccca agcccaaaac cttcctcctc
 360
 aaagcgcagg ccaaggcaaa ggccaaaact tacgagtttc gaagtgactc agccaggggc
 atcoggatee cetacootgg cogetegeee caggacetgg cetecaette ceggg
 475
<210> 2174
<211> 158
<212> PRT
<213> Homo sapiens
<400> 2174
Xaa Gly Glu Glu Met Pro Val His Ala Leu Cys Ala Ala Leu Gly Ala
Gly Val Met Gln Arg Ala Arg Ala Phe Cys Gly Gly Val Ser Ser Ile
                                 25
His Leu Val His Ala Phe Ser His Ala Phe Leu Val Ser Ser Ser Cys
Val Ser Pro His Ala His Thr Leu Ser Pro Leu His Pro Gln Gly Arg
Met Glu Tyr Leu Val Lys Trp Lys Gly Trp Ser Gln Lys Tyr Ser Thr
                    70
Trp Glu Pro Glu Glu Asn Ile Leu Asp Ala Arg Leu Leu Ala Ala Phe
                85
                                     90
Glu Glu Arg Glu Arg Glu Met Glu Leu Tyr Gly Pro Lys Lys Arg Gly
                                 105
Pro Lys Pro Lys Thr Phe Leu Leu Lys Ala Gln Ala Lys Ala Lys Ala
                                                 125
Lys Thr Tyr Glu Phe Arg Ser Asp Ser Ala Arg Gly Ile Arg Ile Pro
                        135
Tyr Pro Gly Arg Ser Pro Gln Asp Leu Ala Ser Thr Ser Arg
                    150
                                         155
<210> 2175
<211> 462
<212> DNA
<213> Homo sapiens
```

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<400> 2175
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cgcctcggta tcattgatga ccaggggcat ttcttgcatc ccaaccagat cctcgtattg
180
ctgtacacct accttctgga ggacaaggga tggcaggtgc cctgcgtgcg taacctcgcg
acgacccacc tgcttgaccg tgtcgccgag gcccacgggc agacctgtta cgaggtaccg
gtcggattta agtgggtgtc gtccaagatg gccgagacca acgccgtcat cggtggtgag
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462
<210> 2176
<211> 154
<212> PRT
<213> Homo sapiens
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Arg Asp Thr Leu Phe Gly Gly Arg Leu Pro Ser Pro Asn Ser Arg Thr
Leu Gln Thr Leu Ala Gln Glu Val Val Glu Arg Gly Ala Asp Ile Gly
Ile Ala Thr Asp Gly Asp Ala Asp Arg Leu Gly Ile Ile Asp Asp Gln
                            40
Gly His Phe Leu His Pro Asn Gln Ile Leu Val Leu Leu Tyr Thr Tyr
                                             60
                        55
Leu Leu Glu Asp Lys Gly Trp Gln Val Pro Cys Val Arg Asn Leu Ala
                                         75
                    70
Thr Thr His Leu Leu Asp Arg Val Ala Glu Ala His Gly Gln Thr Cys
                85
Tyr Glu Val Pro Val Gly Phe Lys Trp Val Ser Ser Lys Met Ala Glu
                                105
Thr Asn Ala Val Ile Gly Gly Glu Ser Ser Gly Gly Leu Thr Val Gln
                                                 125
Gly His Ile Ala Gly Lys Asp Gly Val Tyr Ala Gly Thr Leu Leu Val
                        135
Glu Met Ile Ala Lys Arg Gly Lys Lys Leu
145
<210> 2177
<211> 478
<212> DNA
<213> Homo sapiens
<400> 2177
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60
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accttggact cgattgtcgg cgtgctggcc ggggcatcct ggtatcagcg ggagatccac
  120
  gacttttttg gtgtgaggtt tgtcggccct ggggcagatg atcgtgccct ccttgtccac
 gatgcaccga aaccgcccct gcgcaaggaa gctgtgttgg cgcagcgagc tgacaccgtg
  tggccgggtg cggctgacca ggctggctcg aagtccgcga gtcgacgtct gccggtcggc
 gttcctgacc ctgagacgtg gcggcgtatc aaagacggcg aggatattcc ggatgccgag
 gtcatcgcgg ccatgtctgg ccggcgcccg cgatcagctg cccgtcgaat ggcaagcacg
 gegteaggea ggeaggeatg agacattega etateaacet tgaegtegae gegtgeae
 478
 <210> 2178
 <211> 146
 <212> PRT
 <213> Homo sapiens
 <400> 2178
 Leu Glu Asn His Asp Gly Asp Asp Val Thr Ile Ser Thr Arg Val Pro
                                     10
 Arg Asp Gly Gly Thr Leu Asp Ser Ile Val Gly Val Leu Ala Gly Ala
             20
                                 25
Ser Trp Tyr Gln Arg Glu Ile His Asp Phe Phe Gly Val Arg Phe Val
         35
 Gly Pro Gly Ala Asp Asp Arg Ala Leu Leu Val His Asp Ala Pro Lys
                         55
Pro Pro Leu Arg Lys Glu Ala Val Leu Ala Gln Arg Ala Asp Thr Val
                     70
                                         75
Trp Pro Gly Ala Ala Asp Gln Ala Gly Ser Lys Ser Ala Ser Arg Arg
                                    90
Leu Pro Val Gly Val Pro Asp Pro Glu Thr Trp Arg Arg Ile Lys Asp
                                105
Gly Glu Asp Ile Pro Asp Ala Glu Val Ile Ala Ala Met Ser Gly Arg
                            120
Arg Pro Arg Ser Ala Ala Arg Arg Met Ala Ser Thr Ala Ser Gly Arg
    130
                        135
Gln Ala
145
<210> 2179
<211> 296
<212> DNA
<213> Homo sapiens
<400> 2179
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aagacgtcga tgctgcagga tctggacngc gaccgcgcga tggagatcga cccgctcgtc
teegtegtte aggagatggg aegeetggee aacgtgeega egeecaeget egatgtegtg
180
```

```
ctcccactga tcaagcaacg tgaattcatg acgaagccgg atgccgtggc ggccgcgcag
gaacgtetgg ctaaagegge ataaaccage egeegaaace ageggeataa egeggn
296
<210> 2180
<211> 87
<212> PRT
<213> Homo sapiens
<400> 2180
Val His Phe Arg Val Asp Val Glu Arg Arg Ile Asn Gly Ala Gly Ala
                                    10
Val Gly Ala His Lys Thr Ser Met Leu Gln Asp Leu Asp Xaa Asp Arg
Ala Met Glu Ile Asp Pro Leu Val Ser Val Val Gln Glu Met Gly Arg
                            40
Leu Ala Asn Val Pro Thr Pro Thr Leu Asp Val Val Leu Pro Leu Ile
                                             60
                        55
Lys Gln Arg Glu Phe Met Thr Lys Pro Asp Ala Val Ala Ala Ala Gln
                                         75
                    70
Glu Arg Leu Ala Lys Ala Ala
<210> 2181
<211> 387
<212> DNA
<213> Homo sapiens
<400> 2181
ngegegeegg gatggateat agtetggete gatgeateae gtgegegeat gegegegetg
tegatteceg aeggeatgat egeggeaete gacegtaceg geaaggegea aacgeaeete
acgctggcat cgccggaagc gggtgtcgtc agcgaactga acgtgcgcga cggtgcgatg
gregegeegg ggeagaeget egegaagatt tegggeetet egaagetetg getgategte
gagattccgg aagcgctcgc gctcgatgcg cgtccgggca tgaccgtcga cgcgacgttc
tegggegate egacgeagea tttcaceggg egtateegeg agateetgee gggeateace
 accagtagec geacgettea ggegege
 <210> 2182
 <211> 129
 <212> PRT
 <213> Homo sapiens
 <400> 2182
 Xaa Ala Pro Gly Trp Ile Ile Val Trp Leu Asp Ala Ser Arg Ala Arg
                                     10
 Met Arg Ala Leu Ser Ile Pro Asp Gly Met Ile Ala Ala Leu Asp Arg
```

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Thr Gly Lys Ala Gln Thr His Leu Thr Leu Ala Ser Pro Glu Ala Gly
                              40
 Val Val Ser Glu Leu Asn Val Arg Asp Gly Ala Met Val Ala Pro Gly
                         55
 Gln Thr Leu Ala Lys Ile Ser Gly Leu Ser Lys Leu Trp Leu Ile Val
                     70
 Glu Ile Pro Glu Ala Leu Ala Leu Asp Ala Arg Pro Gly Met Thr Val
 Asp Ala Thr Phe Ser Gly Asp Pro Thr Gln His Phe Thr Gly Arg Ile
                                 105
 Arg Glu Ile Leu Pro Gly Ile Thr Thr Ser Ser Arg Thr Leu Gln Ala
                             120
 Arg
 <210> 2183
 <211> 310
 <212> DNA
 <213> Homo sapiens
 <400> 2183
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ctgcattttc caagcaggga ggggtcgggc atggagaatg aaacattctg agaaaagact
120
taaatgtgga aacttttggt tcaagagggt attctaggag atacaagaaa tatctcctgg
gggcatccaa agggaataac actgtaatct tgagtgatgt atggttccat tgcccgagga
240
atagggatga aaaccataaa ctcctttggg tgggtattaa cttatcantc aaagttacca
300
tanataatgg
310
<210> 2184
<211> 100
<212> PRT
<213> Homo sapiens
<400> 2184
Met Val Thr Leu Xaa Asp Lys Leu Ile Pro Thr Gln Arg Ser Leu Trp
Phe Ser Ser Leu Phe Leu Gly Gln Trp Asn His Thr Ser Leu Lys Ile
Thr Val Leu Phe Pro Leu Asp Ala Pro Arg Arg Tyr Phe Leu Tyr Leu
Leu Glu Tyr Pro Leu Glu Pro Lys Val Ser Thr Phe Lys Ser Phe Leu
Arg Met Phe His Ser Pro Cys Pro Thr Pro Pro Cys Leu Glu Asn Ala
                    70
Glu Pro Ile His Gln Ser Phe Leu Gly Tyr Gln Thr Val His Lys Phe
                                    90
                                                         95
Val Phe Gln Ala
```

<210> 2185

100

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<211> 723
<212> DNA
<213> Homo sapiens
<400> 2185
ngaatateca tgcagcaget cgtcgacaat tttgacggtg ccatecetga cgatettgac
tctcttgtga ccctgcccgg agtcggtcgt aagaccgcca atgttgtttt aggtaatgcc
120
tteggcatec ceggaateae eeeggacaee caegteatge gggtateteg aegtetggge
tggaccgatg cgactacccc cgccaaggtg gaaaccgacc tggctgagct ttttgacccg
tetgaatggg tgatgttgtg teaecgcete atetggeacg ggeggeggeg etgteaeteg
cggcgtcctg cctgcggggt atgcccggtt gccgagtggt gcccgtcctt cggggaaggc
ccaacggatc ccgaggaggc cgccacgtta gtccgggagc cgcgtcgatg aggggggatga
acgttttcgg cgcggtgatg gccgccttga tgtttgctgg ctgcggggga gatgcgggca
tageteatea gegtgaaaat geeggaatae eggggtgete geatttgeeg teggggeega
ttgcgaaaag ttccgggccg gccacagagg gccggcccat gcccgatcac ggcttgcaat
geettggtga ggggeegaeg atetecatgt etegggegae ategagggge gtgaeegteg
tgacgatctg ggcgtcgtgg tgtcgaccat gtcgtagtga ggctccgctc attgcgaacg
720
cgt
723
<210> 2186
<211> 136
<212> PRT
<213> Homo sapiens
<400> 2186
Xaa Ile Ser Met Gln Gln Leu Val Asp Asn Phe Asp Gly Ala Ile Pro
Asp Asp Leu Asp Ser Leu Val Thr Leu Pro Gly Val Gly Arg Lys Thr
                                 25
            20
Ala Asn Val Val Leu Gly Asn Ala Phe Gly Ile Pro Gly Ile Thr Pro
                             40
                                                 45
        35
Asp Thr His Val Met Arg Val Ser Arg Arg Leu Gly Trp Thr Asp Ala
                                             60
    50
Thr Thr Pro Ala Lys Val Glu Thr Asp Leu Ala Glu Leu Phe Asp Pro
                     70
Ser Glu Trp Val Met Leu Cys His Arg Leu Ile Trp His Gly Arg Arg
                                     90
Arg Cys His Ser Arg Arg Pro Ala Cys Gly Val Cys Pro Val Ala Glu
```

```
100
                                 105
                                                      110
Trp Cys Pro Ser Phe Gly Glu Gly Pro Thr Asp Pro Glu Glu Ala Ala
                             120
Thr Leu Val Arg Glu Pro Arg Arg
    130
<210> 2187
<211> 342
<212> DNA
<213> Homo sapiens
<400> 2187
nnacgcgtga aggatgcgcc ccggtcgacc ggccatccgt cttgcctcgc aggcatccag
cccgccatat gctgcaaccg caacaccgct ttgccgtcgc atggcatctc cactccggat
cgcatcgatc cacgagggct atcggcgcga aagaagttgc cggggcaaaa tcccggcgag
gaaagcccga tggagtggaa gacgctgctc aacgacaccc gcttcggagg ggtcgccagc
ctcgatggga cgcgcggacg gtcggagttc cagaaggacc acgaccggat catcttctcc
gaagcettee geaagetggg eegeaagace eaggtgeace eg
342
<210> 2188
<211> 51
<212> PRT
<213> Homo sapiens
<400> 2188
Met Glu Trp Lys Thr Leu Leu Asn Asp Thr Arg Phe Gly Gly Val Ala
                                    10
Ser Leu Asp Gly Thr Arg Gly Arg Ser Glu Phe Gln Lys Asp His Asp
            20
Arg Ile Ile Phe Ser Glu Ala Phe Arg Lys Leu Gly Arg Lys Thr Gln
Val His Pro
    50
<210> 2189
<211> 1412
<212> DNA
<213> Homo sapiens
<400> 2189
ntcgcttcat ggtgcgcaat tacgacaacg ccaagtctca gaatgccgag gcttacaccg
egttetteca egegatgeta gatgeegggg teaacetgee gecategtge tttgaggeet
ggttcctctc ggacgctcac gacgacgaag ctttcgaggt tttccgcgcc gccctgccga
gggctgccca ggcggctgcc caggtgatca gtgcctgaca ccgggctgac ttcgcaggtc
240
```

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ategaggeaa tetgtgeetg gttcgaegee aaeggaegeg atetgeegtg gegeegaeee
300
ggcacctccg cgtggggcgt gcttgttagc gaggtcatga gccaacagac cccgatgtcc
cgggtgatcg ggccgtggca cgagtggatg aaccgctggc ccacccctga tgatttggcg
gaggaggact ctggggaagc ggttgccgcg tgggggcgcc tgggttaccc gcgtcgggcc
ttacgectge attectgtge egtcaegate gecaecgage acgaeggggg tgtgeecaae
agtgacgacg agetegtege ectecegggt attggegaet acacegegag egeagtegte
600
tettttgegt ttggeggeeg egecaeagtg ettgaeacca atgtaegteg eeteateget
agagcagagt ctgggatcgc aaactgtcca acctcggtga cgagggctga gcgggtagtc
720
geegaegegt tggtteeega egaagaegte egageggeea agtgggeggt ggegtegatg
gaattggggg cactggtatg cacggcgcgg tctccgcagt gtgaggtctg cccgatccgg
gatggctgca ggtgggtgat cgacggtagg ccggacaatg ccccggcccg tcgaggacag
ccatggaagg gcacggatcg ccagtgccgc ggcgtgatta tggacgtggt gcgcaacagc
ceteaegggg tgaaggteea gatggetett teegeetgge eegagetega teaggeatea
aggtgcctgg aatccttact cgatgacggt ttagtgcacc gacgaggtaa ccttattagc
ctgtgacctg agaaattett ggccccgacc acccaaacag accgagtcca gcagtgatge
cgctgggtta tccttagagg cggtcctcaa attggatcag ccaaaccacg tcaccgatca
agacaccatg agcacaacac ccaaacagcc gcgcacggcg acagctgccc gacgccgaca
cattgtcgac catctgcgtt ctttggggca ctcggagtcc atcggagatc tttaccaact
gttcggtgtc tctacatcga cgattcgccg cgatgtcgat gccctctcgg atgaatccaa
gatctggaag atttccgggg gagacgtcat ga
1412
 <210> 2190
 <211> 292
 <212> PRT
 <213> Homo sapiens
 <400> 2190
 Ser Val Pro Asp Thr Gly Leu Thr Ser Gln Val Ile Glu Ala Ile Cys
 1.
 Ala Trp Phe Asp Ala Asn Gly Arg Asp Leu Pro Trp Arg Arg Pro Gly
 Thr Ser Ala Trp Gly Val Leu Val Ser Glu Val Met Ser Gln Gln Thr
                                                  45
 Pro Met Ser Arg Val Ile Gly Pro Trp His Glu Trp Met Asn Arg Trp
```

```
50
                         55
                                             60
Pro Thr Pro Asp Asp Leu Ala Glu Glu Asp Ser Gly Glu Ala Val Ala
                     70
Ala Trp Gly Arg Leu Gly Tyr Pro Arg Arg Ala Leu Arg Leu His Ser
                85
                                     90
Cys Ala Val Thr Ile Ala Thr Glu His Asp Gly Gly Val Pro Asn Ser
            100
                                 105
Asp Asp Glu Leu Val Ala Leu Pro Gly Ile Gly Asp Tyr Thr Ala Ser
                             120
Ala Val Val Ser Phe Ala Phe Gly Gly Arg Ala Thr Val Leu Asp Thr
                                             140
                        135
Asn Val Arg Arg Leu Ile Ala Arg Ala Glu Ser Gly Ile Ala Asn Cys
                                         155
Pro Thr Ser Val Thr Arg Ala Glu Arg Val Val Ala Asp Ala Leu Val
                165
                                     170
Pro Asp Glu Asp Val Arg Ala Ala Lys Trp Ala Val Ala Ser Met Glu
            180
                                 185
Leu Gly Ala Leu Val Cys Thr Ala Arg Ser Pro Gln Cys Glu Val Cys
                             200
                                                 205
Pro Ile Arg Asp Gly Cys Arg Trp Val Ile Asp Gly Arg Pro Asp Asn
                        215
                                             220
Ala Pro Ala Arg Arg Gly Gln Pro Trp Lys Gly Thr Asp Arg Gln Cys
                    230
                                        235
Arg Gly Val Ile Met Asp Val Val Arg Asn Ser Pro His Gly Val Lys
                                     250
Val Gln Met Ala Leu Ser Ala Trp Pro Glu Leu Asp Gln Ala Ser Arg
            260
                                265
Cys Leu Glu Ser Leu Leu Asp Asp Gly Leu Val His Arg Arg Gly Asn
                            280
                                                 285
Leu Ile Ser Leu
    290
<210> 2191
<211> 502
<212> DNA
<213> Homo sapiens
<400> 2191
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gactcccttg acgacgacac catttccggg ggtagcccac attggtgctg cctcatggac
tacattgaat cccgttcaat cctgaacggc gttcaggacg tctccagtct cggaaggacc
agagtattgc tgaatctagc cgacatgacc gaacgcggcc tgagggggga gtccattacc
egegaggagg ceetegagat tettegeage agtgatgatg ageteatgte aateategee
geogeoggaa aagtgegteg ceaettttte gataaceggg ttegeeteaa etacetggte
aacctcaagt ceggeetgtg teeegaagac tgeteetatt getegeageg tetgggateg
cgtgccgaga tcacgaaata ctcctgggcc gatccgcaga aggtacacga cgccgtcgag
480
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gctgggattg ccggtggtgc ac
502
<210> 2192
<211> 104
<212> PRT
<213> Homo sapiens
<400> 2192
Leu Asn Leu Ala Asp Met Thr Glu Arg Gly Leu Arg Gly Glu Ser Ile
                                    10
1
Thr Arg Glu Glu Ala Leu Glu Ile Leu Arg Ser Ser Asp Asp Glu Leu
                                25
            20
Met Ser Ile Ile Ala Ala Ala Gly Lys Val Arg Arg His Phe Phe Asp
                            40
Asn Arg Val Arg Leu Asn Tyr Leu Val Asn Leu Lys Ser Gly Leu Cys
                        55
Pro Glu Asp Cys Ser Tyr Cys Ser Gln Arg Leu Gly Ser Arg Ala Glu
                    70
Ile Thr Lys Tyr Ser Trp Ala Asp Pro Gln Lys Val His Asp Ala Val
Glu Ala Gly Ile Ala Gly Gly Ala
            100
<210> 2193
<211> 321
<212> DNA
<213> Homo sapiens
<400> 2193
ccatggggaa tgcagagcac ggacagtcac acagactgtc ctctctggcc ttctggaccc
aacatactcc tettgecaac tgggtattac tggacettac tgggeettac tggacecaac
120
atactectet tgccaactgg ggatttaaaa attttaaaag cccetttate tecetecaca
agteatgtae tgecaacagg gacacactgt tttetttgga aaccetgetg tgtgeecaga
cagaggteee actgeectgg gacageteee ttgeetanag gggaaggagg gtgtgtgtge
tgtgtgtgtt taggttgggg a
<210> 2194
 <211> 106
 <212> PRT
 <213> Homo sapiens
 <400> 2194
Met Gly Asn Ala Glu His Gly Gln Ser His Arg Leu Ser Ser Leu Ala
 1
 Phe Trp Thr Gln His Thr Pro Leu Ala Asn Trp Val Leu Leu Asp Leu
                                 25
             20
 Thr Gly Pro Tyr Trp Thr Gln His Thr Pro Lèu Ala Asn Trp Gly Phe
```

```
35
                             40
                                                  45
 Lys Asn Phe Lys Ser Pro Phe Ile Ser Leu His Lys Ser Cys Thr Ala
                         55
 Asn Arg Asp Thr Leu Phe Ser Leu Glu Thr Leu Leu Cys Ala Gln Thr
 Glu Val Pro Leu Pro Trp Asp Ser Ser Leu Ala Xaa Arg Gly Arg Arg
 Val Cys Val Leu Cys Val Phe Arg Leu Gly
             100
 <210> 2195
 <211> 504
 <212> DNA
 <213> Homo sapiens
<400> 2195
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gacggtgtgg cacaccccaa ctttggcaat atcgtccacg acctggtgct gttgcacagc
ctgggtgtgc gtctggtact ggtccacggt tcgcgcccgc agatcgacaq ccqccttqaq
gcacgaggcc tggtgccgta ttaccacaag ggcatgcgtg tcaccgatgc atcaacgctc
gaatgegtga tegatgetgt egggeaactg egeattgega ttgaagegeg ettgtegatg
300
gacatggcgt cttcgccaat gcagggttcg cgtctgcgcg tagccagcgg caacctggtc
actgcgcggc cgatcggcgt gctcgacggt gtggattttc accataccgg cgaagtgcqc
cgggtggacc gcaagggcat caaccgcctg ctcgatgagc gctcgattgt gctqctqtcq
cccttgggtt actcgcccac cggt
504
<210> 2196
<211> 168
<212> PRT
<213> Homo sapiens
<400> 2196
Xaa Ala Ser Pro Tyr Ile Asn Ala His Arg Asp Cys Thr Phe Val Val
Met Leu Pro Gly Asp Gly Val Ala His Pro Asn Phe Gly Asn Ile Val
            20
                                25
His Asp Leu Val Leu Leu His Ser Leu Gly Val Arg Leu Val Leu Val
                            40
His Gly Ser Arg Pro Gln Ile Asp Ser Arg Leu Glu Ala Arg Gly Leu
Val Pro Tyr Tyr His Lys Gly Met Arg Val Thr Asp Ala Ser Thr Leu
                                        75
Glu Cys Val Ile Asp Ala Val Gly Gln Leu Arg Ile Ala Ile Glu Ala
                85
                                    90
Arg Leu Ser Met Asp Met Ala Ser Ser Pro Mèt Gln Gly Ser Arg Leu
```

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100
                                105
Arg Val Ala Ser Gly Asn Leu Val Thr Ala Arg Pro Ile Gly Val Leu
                                                125
                            120
Asp Gly Val Asp Phe His His Thr Gly Glu Val Arg Arg Val Asp Arg
                                            140
                        135
Lys Gly Ile Asn Arg Leu Leu Asp Glu Arg Ser Ile Val Leu Leu Ser
                   150
Pro Leu Gly Tyr Ser Pro Thr Gly
               165
<210> 2197
<211> 351
<212> DNA
<213> Homo sapiens
<400> 2197
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ttatggggcc ctgcgctcga cgagattgcc gcgggaaaac gtgccggagg ggctgaacag
120
tragatteeg cagtgeagea catecaeggt getaeteaeg ataaaetgte eggtgetgtt
ccgaaacgct acgatggtcg ggatgtcttg gcaggcgagg acccgaatgc accgttgctg
cttgtgccta gcccggctgg tgcagtgttt agtcaaaata aggcacaagc ctggtccaat
gaagaccaca ttgtitttgc ctgtgggcgc tatgaaggta ttgatcaacg c
351
<210> 2198
<211> 117
<212> PRT
<213> Homo sapiens
<400> 2198
Thr Ser Pro Ser Thr Ile Arg Phe Pro Glu Ala Gly Pro Gly Met Val
Met Lys Pro Glu Leu Trp Gly Pro Ala Leu Asp Glu Ile Ala Ala Gly
Lys Arg Ala Gly Gly Ala Glu Gln Leu Asp Ser Ala Val Gln His Ile
                             40
His Gly Ala Thr His Asp Lys Leu Ser Gly Ala Val Pro Lys Arg Tyr
                         55
Asp Gly Arg Asp Val Leu Ala Gly Glu Asp Pro Asn Ala Pro Leu Leu
                                         75
Leu Val Pro Ser Pro Ala Gly Ala Val Phe Ser Gln Asn Lys Ala Gln
                                     90
Ala Trp Ser Asn Glu Asp His Ile Val Phe Ala Cys Gly Arg Tyr Glu
                                 105
            100
Gly Ile Asp Gln Arg
        115
 <210> 2199
 <211> 457
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<212> DNA
<213> Homo sapiens
<400> 2199
agacgeegge egecaagate tgeateeeta ggecaegeta agaceetggg gaagagegea
ggagcccggg agaagggctg gaaggagggg actggacgtg cggagaattc ccccctaaaa
ggcagaagec ceegeceeca eceteegage teegtteggg cagagegeet geetgeetge
cgttgctggg ggcgccacc tcgcccagcc atgccaggcc cggccaccga cgcgqqaaq
atccctttct gcgacgccaa ggaagaaatc cgtgccgggc tcgaaagctc tgagggcggc
ggcggcccgg agaggccagg cgcgcgcggg cagcggcaga acatcgtctg gaggaatqtc
gtectgatga gettgeteca ettgggggee gtgtaetece tggtgeteat ecceaaagee
420
aagccactca ctctgctctg gggtaagtcc cqccgqc
<210> 2200
<211> 152
<212> PRT
<213> Homo sapiens
<400> 2200
Arg Arg Pro Pro Arg Ser Ala Ser Leu Gly His Ala Lys Thr Leu
Gly Lys Ser Ala Gly Ala Arg Glu Lys Gly Trp Lys Glu Gly Thr Gly
                                25
Arg Ala Glu Asn Ser Pro Leu Lys Gly Arg Ser Pro Arg Pro His Pro
                            40
Pro Ser Ser Val Arg Ala Glu Arg Leu Pro Ala Cys Arg Cys Trp Gly
                        55
Arg Pro Pro Arg Pro Ala Met Pro Gly Pro Ala Thr Asp Ala Gly Lys
Ile Pro Phe Cys Asp Ala Lys Glu Glu Ile Arg Ala Gly Leu Glu Ser
Ser Glu Gly Gly Gly Pro Glu Arg Pro Gly Ala Arg Gly Gln Arg
           100
                                105
Gln Asn Ile Val Trp Arg Asn Val Val Leu Met Ser Leu Leu His Leu
                            120
Gly Ala Val Tyr Ser Leu Val Leu Ile Pro Lys Ala Lys Pro Leu Thr
                        135
                                            140
Leu Leu Trp Gly Lys Ser Arg Arg
145
                   150
<210> 2201
<211> 336
<212> DNA
<213> Homo sapiens
<400> 2201
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agtactgcga tggacagcta tgtcgtggat ggtggtcgca aattacatgt ttgtggtaac
60
aaccctgatt gcgatggtta tgaagtcgaa gaaggcgaat tcaagatcaa gggttatgat
120
ggtccgacta tcccatgcga taaatgtgat ggtgagatgc agcttaaaac gggtcgtttt
180
ggtccatatt tcgcatgtac tagctgtgac aatactcgta aggtactcaa gagtggtcaa
240
cetgeteege caegtgtaga eccaateaaa atggageate taegtteaae gaageatgat
gatttcttcg tcttacgtga gggcgctgct ggttta
336
<210> 2202
<211> 112
<212> PRT
<213> Homo sapiens
<400> 2202
Ser Thr Ala Met Asp Ser Tyr Val Val Asp Gly Gly Arg Lys Leu His
 1
Val Cys Gly Asn Asn Pro Asp Cys Asp Gly Tyr Glu Val Glu Glu Gly
                                25
            20
Glu Phe Lys Ile Lys Gly Tyr Asp Gly Pro Thr Ile Pro Cys Asp Lys
                            40
Cys Asp Gly Glu Met Gln Leu Lys Thr Gly Arg Phe Gly Pro Tyr Phe
                        55
Ala Cys Thr Ser Cys Asp Asn Thr Arg Lys Val Leu Lys Ser Gly Gln
                                                             80
                                         75
                    70
Pro Ala Pro Pro Arg Val Asp Pro Ile Lys Met Glu His Leu Arg Ser
                                     90
Thr Lys His Asp Asp Phe Phe Val Leu Arg Glu Gly Ala Ala Gly Leu
                                 105
<210> 2203
<211> 273
 <212> DNA
 <213> Homo sapiens
 <400> 2203
ctcgagagat gcagtcccag ccggggtggg aagctgtgca gacagccccg gatctgggac
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gtgatggaaa actcaacaga ctggttcaga tcttggcccg gagcccagag gcaccgggga
 ccccagggc tgtttctccc tggccacacc agtaccccac ttccaaatgc cctgtaggtg
 accaccagge cacacaggee egtetgaggg gecacagget gtgcaccatg ggacgeagge
 ctgtccctgc ctccctccga tgtcctgatg gtg
 <210> 2204
 <211> 88
 <212> PRT
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<213> Homo sapiens <400> 2204 Met Gln Ser Gln Pro Gly Trp Glu Ala Val Gln Thr Ala Pro Asp Leu Gly Arg Asp Gly Lys Leu Asn Arg Leu Val Gln Ile Leu Ala Arg Ser 25 Pro Glu Ala Pro Gly Thr Pro Arg Ala Val Ser Pro Trp Pro His Gln Tyr Pro Thr Ser Lys Cys Pro Val Gly Asp His Gln Ala Thr Gln Ala Arg Leu Arg Gly His Arg Leu Cys Thr Met Gly Arg Arg Pro Val Pro Ala Ser Leu Arg Cys Pro Asp Gly 85 <210> 2205 <211> 387 <212> DNA <213> Homo sapiens <400> 2205 gnnnnnggng nnnnactggt gtgcatggtt aaaatcctgc aagctactgg gttgccacag 60 catctgtccc actttgtgtt ctgcaaatac agcttctggg atcaacagga gccggtgatt 120 gtcgctcctg aagtggacac ctcctcctct tccgtcagca aggagccgca ctgcatggtt gtctttgatc attgcaatga gttttctgtt aacatcaccg aagactttat cgagcatctt tccgaaggag cattggcaat tgaagtatat ggacataaaa taaacgatcc ccggaaaaac cccgccctgt gggatttggg aatcatccaa gcaaagacac gtagtcttcg ggacagatgg agtgaagtgc ccaggaaatt ggaattc 387 <210> 2206 <211> 129 <212> PRT <213> Homo sapiens <400> 2206 Xaa Xaa Gly Xaa Xaa Leu Val Cys Met Val Lys Ile Leu Gln Ala Thr 10 Gly Leu Pro Gln His Leu Ser His Phe Val Phe Cys Lys Tyr Ser Phe Trp Asp Gln Gln Glu Pro Val Ile Val Ala Pro Glu Val Asp Thr Ser Ser Ser Ser Val Ser Lys Glu Pro His Cys Met Val Val Phe Asp His 60 Cys Asn Glu Phe Ser Val Asn Ile Thr Glu Asp Phe Ile Glu His Leu

Ser Glu Gly Ala Leu Ala Ile Glu Val Tyr Gly His Lys Ile Asn Asp

70

90

85

```
Pro Arg Lys Asn Pro Ala Leu Trp Asp Leu Gly Ile Ile Gln Ala Lys
                                105
Thr Arg Ser Leu Arg Asp Arg Trp Ser Glu Val Pro Arg Lys Leu Glu
                                                125
                            120
        115
Phe
<210> 2207
<211> 667
<212> DNA
<213> Homo sapiens
<400> 2207
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120
atagtateca aactgggace eetgeetegg ateetgaggg aegteeacae ageaetgage
180
accccaggta gegggcaget eccagggace aatgacetgg cetecacace gggetetgge
agcagcagca teteagetgg getgeagaag atggtgattg agaacgatet tteeggtetg
atagatttca cccggttacc gtctccaacc cccgaaaaca aggacttgtt ttttgtcaca
aggtcctccg gggtccagcc ctcacctgcc cgcagctcga gttactcgga agccaacgag
cctgatcttc agatggccaa cggtggcaag agcctctcca tggtggacct ccaggacgcc
cgcacgctgg atggggaggc aggctccccg gcgggccccg acgtcctccc cacagatggg
caggeegetg cageteaget ggtggeeggg tggeeggeee gggeaaceee agtgaacetg
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660
ggcgcgc
667
<210> 2208
<211> 222
<212> PRT
<213> Homo sapiens
<400> 2208
Ile Ser Asn Pro Glu Thr Leu Ser Asn Thr Ala Gly Phe Glu Gly Tyr
                                     10
Ile Asp Leu Gly Arg Glu Leu Ser Ser Leu His Ser Leu Leu Trp Glu
                                 25
             20
Ala Val Ser Gln Leu Glu Gln Ser Ile Val Ser Lys Leu Gly Pro Leu
                             40
 Pro Arg Ile Leu Arg Asp Val His Thr Ala Leu Ser Thr Pro Gly Ser
                                             60
    50
 Gly Gln Leu Pro Gly Thr Asn Asp Leu Ala Ser Thr Pro Gly Ser Gly
```

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65
                     70
                                          75
 Ser Ser Ser Ile Ser Ala Gly Leu Gln Lys Met Val Ile Glu Asn Asp
                                      90
 Leu Ser Gly Leu Ile Asp Phe Thr Arg Leu Pro Ser Pro Thr Pro Glu
                                  105
 Asn Lys Asp Leu Phe Phe Val Thr Arg Ser Ser Gly Val Gln Pro Ser
         115
                             120
                                                  125
 Pro Ala Arg Ser Ser Ser Tyr Ser Glu Ala Asn Glu Pro Asp Leu Gln
                         135
                                              140
 Met Ala Asn Gly Gly Lys Ser Leu Ser Met Val Asp Leu Gln Asp Ala
                     150
                                         155
 Arg Thr Leu Asp Gly Glu Ala Gly Ser Pro Ala Gly Pro Asp Val Leu
                 165
                                     170
 Pro Thr Asp Gly Gln Ala Ala Ala Gln Leu Val Ala Gly Trp Pro
             180
                                 185
                                                      190
 Ala Arg Ala Thr Pro Val Asn Leu Ala Gly Leu Ala Thr Val Arg Arg
                             200
 Ala Gly Gln Thr Pro Thr Thr Pro Gly Thr Ser Glu Gly Ala
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                         215
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 <211> 353
 <212> DNA
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 ccacagcaga agtgaccaag ctgtagcttc cttagatggc cccaagggtg ggaggcttca
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 ctctatggaa gcacttaact gcctgttccc cgcttattct gtgtttaaac caaggaaaca
 acatgcctgg ggtctgaaat cctggattca aatcctgact gtgttgtgtg ctt
 353
 <210> 2210
 <211> 94
 <212> PRT
<213> Homo sapiens
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Met Arg Glu Ile Ala Leu Gly Gln Met Val Ser Ala Glu Gly Thr Pro
Asp His Ser Arg Ser Asp Gln Ala Val Ala Ser Leu Asp Gly Pro Lys
            20
                                25
Gly Gly Arg Leu His Thr Ala Glu Pro Gly Ser Gly Gly Thr Leu Gly
Met Phe Phe Pro Ile Arg Pro Leu Ser Ser Met Glu Ala Leu Asn Cys
                        55
Leu Phe Pro Ala Tyr Ser Val Phe Lys Pro Arg Lys Gln His Ala Trp
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80
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65
Gly Leu Lys Ser Trp Ile Gln Ile Leu Thr Val Leu Cys Ala
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<211> 493
<212> DNA
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cactgtaccc tgggactgca cagagggaaa cgattaccaa acccagagac ggggaccgga
120
aggaaggagg ggaaggggat ggatccatgt actttggggt tggagaaatg ggggacagca
agtotootoa accoaaatao agooocootg ggaggotoot gooocgtoto tgtggatagt
240
gageceaget geaagggegg eetgeeaggg acaaacecae caaaaggaaa gatgttgtag
aaccaaagag aggeteeetg aaagaggegt eteeegggge eteeaageee gggagegeee
ggcggacagg gggcagtggc caagtctgtg cggaccctga ccgcctcaga gaacgagagc
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ctgtcatccc ggg
493
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<211> 126
<212> PRT
<213> Homo sapiens
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Arg Thr Asp Leu Ala Thr Ala Pro Cys Pro Pro Gly Ala Pro Gly Leu
            20
Gly Gly Pro Gly Arg Arg Leu Phe Gln Gly Ala Ser Leu Trp Phe Tyr
                            40
Asn Ile Phe Pro Phe Gly Gly Phe Val Pro Gly Arg Pro Pro Leu Gln
                        55
Leu Gly Ser Leu Ser Thr Glu Thr Gly Gln Glu Pro Pro Arg Gly Ala
                                        75
                    70
Val Phe Gly Leu Arg Arg Leu Ala Val Pro His Phe Ser Asn Pro Lys
Val His Gly Ser Ile Pro Phe Pro Ser Phe Leu Pro Val Pro Val Ser
                                105
Gly Phe Gly Asn Arg Phe Pro Leu Cys Ser Pro Arg Val Gln
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<210> 2213 ·
<211> 327
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 <213> Homo sapiens
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 acggaaggcc cggccaatcc gatcgcggcc tcggcgctgc gcatcatccg ggcgcgcgtg
 tegeagetet ggggcaegte getgeteege aacggaeggg eggaacagag tgtggtggag
 ategeeeggt tggtegaege gateaegtea egggaegagg aageegeeea gegtgeaetg
 300
 ctcgaccaca atcgcagcgc gttggaa
327
<210> 2214
<211> 95
<212> PRT
<213> Homo sapiens
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Met Arg Ser Pro Ser Ile Ala Gly Ala Ser Thr His Trp Val Ile Ser
                                     10
Pro Ser Lys His Arg Ser Thr Lys Val Leu Thr Glu Gly Pro Ala Asn
            20
Pro Ile Ala Ala Ser Ala Leu Arg Ile Ile Arg Ala Arg Val Ser Gln
Leu Trp Gly Thr Ser Leu Leu Arg Asn Gly Arg Ala Glu Gln Ser Val
Val Glu Ile Ala Arg Leu Val Asp Ala Ile Thr Ser Arg Asp Glu Glu
Ala Ala Gln Arg Ala Leu Leu Asp His Asn Arg Ser Ala Leu Glu
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                                    90
                                                         95
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<211> 430
<212> DNA
<213> Homo sapiens
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accepttace teactetegt gettggeetg ttgcaggeaa eggeettegt caegettgee
acctecggee gtetatteac enntgeaget ntgecagteg tetactecae eteggtette
gaagtcgtcg tcatgateet gactatgacg geeggtacga ceategteat gtggatgggt
gageteatea ecgaeegegg tateggeaac ggtatgtega teatgatttt caeteagatt
360
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geggegegtt teeetgaete getgtggtet atcaaggteg etegaaatgg egeeggteag
420
gctcacgcgt
43Ô
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<211> 143
<212> PRT
<213> Homo sapiens
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Thr Val Val Ile Pro Lys Leu Glu Thr Leu Lys Lys Glu Gly Ala Ser
Gly Gln Asn Lys Ile Thr Gln Tyr Thr Arg Tyr Leu Thr Leu Val Leu
                            40
Gly Leu Leu Gln Ala Thr Ala Phe Val Thr Leu Ala Thr Ser Gly Arg
Leu Phe Thr Xaa Ala Ala Xaa Pro Val Val Tyr Ser Thr Ser Val Phe
                                        75
                    70
Glu Val Val Val Met Ile Leu Thr Met Thr Ala Gly Thr Thr Ile Val
                                    90
Met Trp Met Gly Glu Leu Ile Thr Asp Arg Gly Ile Gly Asn Gly Met
                                105
            100
Ser Ile Met Ile Phe Thr Gln Ile Ala Ala Arg Phe Pro Asp Ser Leu
                            120
Trp Ser Ile Lys Val Ala Arg Asn Gly Ala Gly Gln Ala His Ala
                                            140
                        135
    130
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<211> 444
<212> DNA
<213> Homo sapiens
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catgecetgg aggecacegt eccaggtegg gteaccaege eggaegeeca agteatecag
acctgtgccg tgttgcgtga ccttgctcgc gtggcagtca gccagctggg ccgaaatgac
gaggactcta gggaaccagt cgatgcggag agagtacagg ctcaagcgnc gatgcgggag
gttttcgaga ccgccgaacg catggtgggg ctggccgccg ccgacgtggt gtgggtctct
gagtetgaga agggataceg cageatteae gtegeteege tgagtgttgg eggettgeta
cgagagaatg tetttgetca gtcc
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<210> 2218
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<211> 148
 <212> PRT
 <213> Homo sapiens
 <400> 2218
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                                     10
 Ala Lys Arg Ala Met Thr Trp Leu Asp Asp Asp Val Gly Ala Asp Leu
 Leu Asn Gln Ala Asp Ser Met Asp His Ala Leu Glu Ala Thr Val Pro
 Gly Arg Val Thr Thr Pro Asp Ala Gln Val Ile Gln Thr Cys Ala Val
 Leu Arg Asp Leu Ala Arg Val Ala Val Ser Gln Leu Gly Arg Asn Asp
                     70
                                         75
Glu Asp Ser Arg Glu Pro Val Asp Ala Glu Arg Val Gln Ala Gln Ala
                                     90
Xaa Met Arg Glu Val Phe Glu Thr Ala Glu Arg Met Val Gly Leu Ala
            100
                                 105
Ala Ala Asp Val Val Trp Val Ser Glu Ser Glu Lys Gly Tyr Arg Ser
Ile His Val Ala Pro Leu Ser Val Gly Gly Leu Leu Arg Glu Asn Val
                         135
Phe Ala Gln Ser
145
<210> 2219
<211> 688
<212> DNA
<213> Homo sapiens
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tggtcgatcc ttttccccgc tgggtggctg accagcgctt tggtcagtca ggggttcggt
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getttegege tegttgggta eggatggett gegatgeaca acttgegtea ecetgatgag
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420
atcgagacga atctcggcgc tccgttcatg ttgctcattg tgaaagcttg gcgcgcgcca
cccgaaggaa ttcctggctc taccagtccg cgcccgaccg cccgtggcac agcgcgagtc
tatatgaggg atgatettgt ttetegaege ettetaeage gteettgaga geetetgega
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agagccgtgt gatgaggcga agtcatga
688
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<212> PRT
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Thr Asn Met Ala Trp Met Trp Leu Trp Phe Asp Glu Pro Gly Asn Arg
                                25
            20
Trp Glu Trp Ser Ile Leu Phe Pro Ala Gly Trp Leu Thr Ser Ala Leu
                            40
        35
Val Ser Gln Gly Phe Gly Gly Met Phe His Ser Val Gln Ile Ala Arg
                        55
His Val Ser Ser Tyr His Gly Ile Met Val Ala Phe Ala Leu Val Gly
                                        75
                    70
65
Tyr Gly Trp Leu Ala Met His Asn Leu Arg His Pro Asp Glu Arg Tyr
                85
Ser Ile Arg Ser Ala Leu Ile Ile Gly Ile Gly Ile Gln Phe Thr Trp
                                105
Glu Ala Val Leu Met Ile Ser Gly Ile Arg Pro Leu Thr Trp Arg Pro
                            120
Leu Val Ile Asp Ser Leu Ile Glu Thr Asn Leu Gly Ala Pro Phe Met
                                            140
                        135
Leu Leu Ile Val Lys Ala Trp Arg Ala Pro Pro Glu Gly Ile Pro Gly
                    150
                                         155
Ser Thr Ser Pro Arg Pro Thr Ala Arg Gly Thr Ala Arg Val Tyr Met
                                    170
                165
Arg Asp Asp Leu Val Ser Arg Arg Leu Leu Gln Arg Pro
                                185
<210> 2221
<211> 530
<212> DNA
<213> Homo sapiens
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aaagaagagc aaaccgccat cgctaacgtc ctttccgaca tggacaccga actcgacgcc
ctacaacaac gcctcagtaa aaccaaaacc atcaagcaag gcatgatgca agaactactc
acagggaaaa cgaggttggt atgagccaca aggtgaattt agtgcatgag ctggataagc
gtattatctc ggtaaatacg ttattgtcac agcctgagct tgctattccg gcttatcagc
ggccttataa atggtcacaa gagaacctaa atgcgctgat gagtgattta cgaatttatc
gtaacaaatc ggcttatcgg ctggggacgg tggtttttca ttatcataat gaacccgtag
420
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acaacgagaa tacccacaag ctggatattg tagacggtca gcaacgtacc ttaaccttgt
 tgctgctagt caaagccatt ttagaagaac ggttgtctgc gttaacgcgt
 530
 <210> 2222
 <211> 67
 <212> PRT
 <213> Homo sapiens
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 Thr Ser Val Ala Ala Ile Tyr Thr Arg Asp Leu Leu Gln Leu Ser Leu
Ile Leu Pro Pro Lys Glu Glu Gln Thr Ala Ile Ala Asn Val Leu Ser
            20
                                 25
Asp Met Asp Thr Glu Leu Asp Ala Leu Gln Gln Arg Leu Ser Lys Thr
                             40
Lys Thr Ile Lys Gln Gly Met Met Gln Glu Leu Leu Thr Gly Lys Thr
    50
                         55
Arg Leu Val
65
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<212> DNA
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acaggegega gacattgttg tggaegatge egetgtegat eggtggeaeg eeggtgaaga
tgcatttatc caacggccgg gacagggccg gcagttcaca gtccagtttg taaagcgctg
cgcgtcctgc gctgatatag gcctggagat gccccatggc gtgtcgggca acctcgtagt
traggregte gagraceaca aggatgargt tgtgetteat aaggggagar getergeaar
gataggettg acteatttea ettgaggaac ggggteaaaa etgtgggege gggeaageee
360
geteceacae aagecegtge ceacattgga tetecaatgt gggetacage ettactgeat
attgatgatg acttetteet gecaettetg eggeagtgee ttggaggtet ttteceaege
480
gt
482
<210> 2224
<211> 105
<212> PRT
<213> Homo sapiens
<400> 2224
Met Ser Gln Ala Tyr Arg Cys Gly Ala Ser Pro Leu Met Lys His Asn
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10
                 5
 1
Val Ile Leu Val Val Leu Asp Gly Leu Asn Tyr Glu Val Ala Arg His
            20
Ala Met Gly His Leu Gln Ala Tyr Ile Ser Ala Gly Arg Ala Ala Leu
                            40
Tyr Lys Leu Asp Cys Glu Leu Pro Ala Leu Ser Arg Pro Leu Asp Lys
                       55
Cys Ile Phe Thr Gly Val Pro Pro Ile Asp Ser Gly Ile Val His Asn
                                        75
                    70
Asn Val Ser Arg Leu Ser Asn Gln Arg Ser Ile Phe His Tyr Ala Thr
                                    90
                85
Asp Ala Gly Leu Thr Thr Ala Ala Ala
                                105
            100
<210> 2225
<211> 753
<212> DNA
<213> Homo sapiens
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aaggagggca teggeeacae aggttgggte gteteggaeg agetegggee ggtgggeaae
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gaccaggeet ggeggeacaa ccaggtegee gge
<210> 2226
<211> 219
<212> PRT
<213> Homo sapiens
<400> 2226
Xaa Ala Ser Asp Pro His Gly Pro Leu Thr Trp Arg Tyr Asp Arg Glu
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1
                                      10
 Arg Ala Gly Ala Gly Val Ile Leu Asp Leu Met Gly His Gly Glu Asp
                                  25
 Leu Val Gln Tyr Leu Leu Lys Gly Arg Phe Thr Glu Val Ser Ala Val
 Ser Glu Thr Phe Ile Arg Gln Arg Pro Lys Pro Leu Lys Glu Gly Ile
                          55
 Gly His Thr Gly Trp Val Val Ser Asp Glu Leu Gly Pro Val Gly Asn
                                          75
 Glu Asp Tyr Cys Ala Val Ile Ala Arg Met Glu Asn Gly Val Met Cys
                 85
                                      90
 Thr Leu Glu Ser Ser Arg Val Ser Val Gly Pro Arg Ala Glu Tyr Ile
                                  105
 Val Glu Ile Tyr Gly Thr Asp Gly Ser Ile Arg Trp Asn Phe Glu Asp
         115
 Leu Asn His Leu Gln Val Cys Leu Gly Arg Asn Asn Arg Ala Leu Gln
 Gly Tyr Val Asn Cys Met Ala Gly Pro Asp Phe Pro Glu Phe Met Arg
                     150
                                          155
 Phe Gln Pro Gly Ala Gly Thr Ser Met Gly Phe Asp Asp Met Lys Val
                 165
                                     170
 Val Glu Ala Ala Lys Phe Val Arg Gly Val Leu Asp Gly Gln Gln Tyr
                                 185
 Gly Pro Ser Val Ala Asp Gly Trp Ala Ser Ala Glu Val Asn Asp Ala
                             200
 Ile Val Ala Ser Cys Gly Gly Pro Cys Leu Ala
    210
 <210> 2227
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<212> DNA
<213> Homo sapiens
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324
<210> 2228
<211> 98
<212> PRT
<213> Homo sapiens
<400> 2228
Met Ala His Leu Leu Lys Thr Val Val Ala Gly Cys Ser Cys Pro Phe
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Leu Ser Asn Leu Gly Ser Ser Lys Val Leu Pro Gly Lys Arg Asp Phe
            20
Val Arg Thr Leu Arg Thr His Gln Ala Leu Trp Cys Lys Ser Pro Val
                            40
Lys Pro Gly Ile Pro Tyr Lys Gln Leu Thr Val Gly Val Pro Lys Glu
                        55
Ile Phe Gln Asn Glu Lys Arg Val Ala Leu Ser Pro Ala Gly Val Gln
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                                        75
Ala Leu Val Lys Gln Gly Phe Asn Val Val Val Glu Ser Gly Ala Gly
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Glu Ala
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<211> 320
<212> DNA
<213> Homo sapiens
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tageteagee cetteetgeg tgeetggeee tgggaggatg ceatececag teceetette
tgggccctgc tctggggact cggcacagat ggatccagtg catcctcagc cccctgagaa
getgtgetge cateagetee ttetetgggt acagggeacg ggaagegget geccageagg
cctcggtccc gccaagctgt
320
<210> 2230
<211> 94
<212> PRT
<213> Homo sapiens
<400> 2230
Met Gly Gly Pro Asp Gly Glu Ala His Arg Glu Gly Thr Gly Gly Gly
Arg Gly Gly Glu Lys Thr Asp Ser Gly Arg Thr Leu Ala Gln Pro Leu
Pro Ala Cys Leu Ala Leu Gly Gly Cys His Pro Gln Ser Pro Leu Leu
                            40
Gly Pro Ala Leu Gly Thr Arg His Arg Trp Ile Gln Cys Ile Leu Ser
Pro Leu Arg Ser Cys Ala Ala Ile Ser Ser Phe Ser Gly Tyr Arg Ala
                    70
                                         75
Arg Glu Ala Ala Ala Gln Gln Ala Ser Val Pro Pro Ser Cys
                                    90
<210> 2231
<211> 671
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1637

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<212> DNA
  <213> Homo sapiens
 <400> 2231
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 tgcatagaac aatgcaaacc agtcagtccc ctctgagtca gaccaggctg accatcaggg
 acatgcagae actggcaggg ctggggttgt tececategg tgatageetg gtgeececat
 ggcccctgat gcccacggct gtctggaagg ctgggtcact gctgagaaga caaggagaca
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660
cagctcttaa g
671
<210> 2232
<211> 177
<212> PRT
<213> Homo sapiens
<400> 2232
Met Glu Lys Ser Pro Val Gln Cys Pro Thr Gly Lys Cys Phe Pro Leu
                                    10
Ile Val Glu Leu Ser Cys Pro Phe Thr Val Gly Val Thr Gly Gly Val
                                25
Gly Val Arg Val Glu Thr Gly Glu Gly Ser Glu His Leu Trp Asp Thr
                            40
His His Val Pro Gly Thr Glu Pro Tyr Leu Asp Leu Leu Gln Pro Ser
Gln Trp His Cys Glu Ala Ser Val Val Leu Gln Met Arg Lys Leu Arg
                                        75
Phe Val Ala Ile Thr Asp Lys Gln Met Thr Leu Asn Gly Ala Gly His
                                    90
Val Ile Cys His Arg Tyr Met His Arg Thr Met Gln Thr Ser Gln Ser
                                105
Pro Leu Ser Gln Thr Arg Leu Thr Ile Arg Asp Met Gln Thr Leu Ala
                            120
Gly Leu Gly Leu Phe Pro Ile Gly Asp Ser Leu Val Pro Pro Trp Pro
Leu Met Pro Thr Ala Val Trp Lys Ala Gly Sèr Leu Leu Arg Arg Gln
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155
145
                   150
Gly Asp Ile Phe Ser His Gln Leu Ser Phe Phe Tyr Ser Phe Leu Asp
               165
Thr
<210> 2233
<211> 6199
<212> DNA
<213> Homo sapiens
<400> 2233
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aggtecegga gagagegagt gegteagtet egaatggaca cagatetgga aaccatggat
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Solid Soli					_		•	• • •	•			C1 n	N.c.	C1	uic	
The Thr	His	Glu	Tyr	Phe		Leu	Lys	ALA	гÀг		ATG	GIII	ASP	GIU		Dea
Read	_						7	D I	01		T 011	Dwa	Dro	C1 n		Dhe
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Safe Phe Arg His Leu Ile Leu Pro Glu Lys Tyr Pro Pro Pro Thr Safo	_						•			a	~	~1	Th~		Tan	Pro
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S50						•	-1 -		D	~1	T 1.00	T		Pro	Pro	Thr
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				120	05				12	10				12	15
Tr	p Gl	у Ме	t As	n Val	l Ala	Ala	a Hi	s Lei			e Il	e Me	t Ası	Th	r Gln
			12	20				122	25	· .			123	30	
Ty	r Ty:	r As 12	n Gl	y Lys	: Ile	His	3 Al. 12	а Туз 40	r Vai	l As	р Ту:	r Pr		Ty:	r Asp
Va.	Le:	u Gl 50	n Mei	t Val	Gly	His		a Asr	Arg	g Pro	2 Let 126	ı Glı	n Asp	Ası	o Glu
Gly	Arg	у Су	s Va	l Ile	Met			a Gly	, Sei	Lys			o Phe	Phe	Lys
126	55				127	0				127	75				1280
Lys	s Phe	e Le	u Tyi	c Glu 128	Pro	Lev	ı, Pro	Val	. Gli 129		His	Let	ı Asp	His	_
Met	His	As ₁	p His 130	Phe	Asn	Ala	Gli			Thr	Lys	Thi		Glu	Asn
Lvs	Glr	ı Ası		Val	Aen	Tier	Tor	130		mb-	. Db.		131	0	_
-3-		13:	15		, asp	- 7 -	132		111	, ini	Pne	132		Arg	Arg
Met	Thr 133	Glı	n Asr	Pro	Asn	Tyr 133	Tyr		Leu	Gln	Gly	Ile	Ser	His	Arg
His	Leu	Sei	. Asp	His	Leu			Leu	Val	Glu	Gln	Thr	T.eu	Ser	Acn
134	5				1350)				135	5				1360
				Lys 136	5				137	0				137	5
Pro	Leu	Asn	Leu 138	Gly 0	Met	Ile	Ala	Ala 138	Tyr	Tyr	Tyr	Ile	Asn 1390	Tyr	Thr
Thr	Ile	Glu 139	Leu	Phe	Ser	Met	Ser	Leu	Asn	Ala	Lys		Lys	, Val	Arg
Gly	Leu	Ile		Ile	Ile	Ser	140 Asn		Ala	Glu	Tyr	140 Glu	5 Asn	Ile	Pro
Tlo	141		w.	G1	>	141!		_			142	0			
142	719 5	nis	nis	Glu	ASP 1430	ASI	Leu	Leu	Arg	GIn 143		Ala	Gln	Lys	
Pro	His	Lys	Leu	Asn			Lvs	Phe	Asn	ASD	Pro	Hie	Val	Lve	1440
				1445	5				1450)				1459	5
Asn	Leu	Leu	Leu	Gln	Ala	His	Leu			Met	Gln	Leu	Ser	Ala	Glu
T.A11	Gla	Se*	146		C1	~1	T 1 -	1465	5	_			1470		
		147	5	Thr			1480) .				1489	;		
	1490)		Asp		1495	;				1500)			
Leu	Ala	Ala	Met	Glu	Leu	Ala	Gln	Met	Val	Thr	Gln	Ala	Met	Trp	Ser
1505 Lvs		Ser	Tur		1510	21 m	Ton	Dwa	***	1515		_			1520
-7-	П		- / -	Leu 1525	Dys (3111	Leu		H15 1530		Inr	ser		His 1535	
Lys	Arg	Cys	Thr 1540	Asp	Lys (Sly	Val	Glu 1545	Ser	Val	Phe	Asp	Ile	Met	Glu
Met	Glu	Asp 1555	Glu	Glu .	Arg A	Asn	Ala	Leu :	Leu	Gln				Ser	Gln
Ile.	Ala			Ala .	Arg I		1560 Cys		Arg	Tyr	2ro	1565 Asn	Ile (Glu	Leu
	1570				1	.575					1580				
Ser	Tyr	Glu	Val	Val :	Asp I	ys .	Asp	Ser :				Gly	Gly 1	Pro	Val
1585 Val		Leu	Val		1590	:1,,	λ ~~	C1	~1	1595		 1-	~ 3	_	1600
			-u2	Gln 1 1605	Leu C	ııu ı	w.g		31u (1610	eru ,	val	Thr			Val
Ile i	Ala	Pro	Leu	Phe 1	Pro G	ln 1	Lys .	Arg (Glu (Glu (Glv '	Trp '	ro 1	l615 /al '	√a1
			1620	·				1625					1630		
ile (Gly A	Asp	Ala	Lys S	Ser A	sn S	Ser :	Leu 1	[le s	Sèr :	Ile :	Lys i	Arg I	eu :	Thr

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1640
        1635
Leu Gln Gln Lys Ala Lys Val Lys Leu Asp Phe Val Ala Pro Ala Thr
                                            1660
                        1655
Gly Ala His Asn Tyr Thr Leu Tyr Phe Met Ser Asp Ala Tyr Met Gly
                                        1675
                    1670
Cys Asp Gln Glu Tyr Lys Phe Ser Val Asp Val Lys Glu Ala Glu Thr
                                    1690
Asp Ser Asp Ser Asp
            1700
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teagtgettg cacattetee actggeagaa tgaeteeega egtggetegg geteeeegga
120
agacacccct cgaagcagtg gtgcctctag catcttcgac ctgaggaacc tggcagctga
ctcattgttg ccctctctgc tagagegggc ggccccagaa gatgtggacc ggcgcaatga
agecettega eggeageace ggeeceegge cetgetteee etetaceegg cacetgaega
ggatgaagec ggggaacget gtageegeet agagecaeec eegegageae tttggacaaa
ggatcttggt caagtgtctg tcgctcaagt tcgagattga aattgagccc atctttggga
tettggetet gtatgatgtg eggaagaaaa agaagatete ggaaaaette taettegaee
tgaactcgga ctccatgaag gggctgcttc gggctcatgg cacccaccct gccatctcca
ccctggcccg ctctgccatc ttctctgtga cctacccctc acgcgt
586
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Met Ser Pro Lys Gln Pro Leu His Gly Val Arg Val Gln Val Glu Val
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Glu Val Phe Arg Asp Leu Leu Phe Leu Pro His Ile Ile Gln Ser Gln
                                 25
            20
Asp Pro Lys Asp Gly Leu Asn Phe Asn Leu Glu Leu Glu Arg Gln Thr
                            40
Leu Asp Gln Asp Pro Leu Ser Lys Val Leu Ala Gly Val Ala Leu Gly
    50
Gly Tyr Ser Val Pro Arg Leu His Pro Arg Gln Val Pro Gly Arg Gly
                    70
                                         75
Glu Ala Gly Pro Gly Ala Gly Ala Ala Val Glu Gly Leu His Cys Ala
```

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85
                                     90
                                                          95
 Gly Pro His Leu Leu Gly Pro Pro Ala Leu Ala Glu Arg Ala Thr Met
                                 105
 Ser Gln Leu Pro Gly Ser Ser Gly Arg Arg Cys
                             120
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 <212> DNA
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 tggggcgcag gagtgctggc cagcttgggg atagtccctg gaagtggtcg ggagcactqa
gggaggagct gaggtccaag ccctcctcca gtgcatcacc ctggtcagga gtggggcagt
gtggagccag gggctcttca gccagcacct gctgcactat gggctccagc tgtgcaagac
240
caccegtgag aaggagtett gttgggagca gggtggggaa gcactgtggg agaggtgtee
ttggctcggg tagcagggac cttgatgtat cttgaagcca gggggccgac tgaggcgctt
gtctgaaggc ctccatgaga gggagggggc tggagggggc tgttcccaat aatagctcta
420
t
421
<210> 2238
<211> 124
<212> PRT
<213> Homo sapiens
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Met Glu Ala Phe Arg Gln Ala Pro Gln Ser Ala Pro Trp Leu Gln Asp
Thr Ser Arg Ser Leu Leu Pro Glu Pro Arg Thr Pro Leu Pro Gln Cys
Phe Pro Thr Leu Leu Pro Thr Arg Leu Leu Leu Thr Gly Gly Leu Ala
                            40
Gln Leu Glu Pro Ile Val Gln Gln Val Leu Ala Glu Glu Pro Leu Ala
                        55
Pro His Cys Pro Thr Pro Asp Gln Gly Asp Ala Leu Glu Glu Gly Leu
Asp Leu Ser Ser Ser Leu Ser Ala Pro Asp His Phe Gln Gly Leu Ser
Pro Ser Trp Pro Ala Leu Leu Arg Pro Lys Arg Ser Val Trp Gly Ala
                                105
Ser Ser Trp Leu Gln Trp Asp Thr Gly Val Pro Ser
       115
                            120
<210> 2239
<211> 623
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<212> DNA
<213> Homo sapiens
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aggeagecag geageagete tageteagee eetgggeage eeageaeagg ggttgetega
cccacagtta gttctggccc tgtgcctagg cgccagaatg gcagctccag ctcaggacct
gagegateaa teagtgggte caagaageea accaatgaet caaateeete taggeggaea
300
greagtggta catgtggeec tggacaacet geaageaget eaggtggeec tgggegaece
atcagtggtt cagttagttc tgcaagaccc ttgggcagct ctcgtggccc tggccggcct
gtgagcagtc cacatgaact tcgacgacca gtgagtggct tgggcccccc ggggcggtct
gtcagtggcc ctgggagatc cataagtggc ccaattccag ctggacggac tgtcagtaat
tcagtcccag gaagaccagt gagcagcttg ggacctgggc aaacagttag tagctcaggt
cccactataa agcctaagtg cac
623
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<211> 207
<212> PRT
<213> Homo sapiens
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Ala Ser Arg Thr Gln Lys Ser Ala Val Glu His Lys Ala Lys Lys Ser
Leu Ser His Pro Ser His Ser Arg Pro Gly Pro Met Val Thr Pro His
                                25
Asn Lys Ala Lys Ser Pro Gly Val Arg Gln Pro Gly Ser Ser Ser
                            40
Ser Ala Pro Gly Gln Pro Ser Thr Gly Val Ala Arg Pro Thr Val Ser
                        55
Ser Gly Pro Val Pro Arg Arg Gln Asn Gly Ser Ser Ser Ser Gly Pro
Glu Arg Ser Ile Ser Gly Ser Lys Lys Pro Thr Asn Asp Ser Asn Pro
                                    90
Ser Arg Arg Thr Val Ser Gly Thr Cys Gly Pro Gly Gln Pro Ala Ser
                                105
            100
Ser Ser Gly Gly Pro Gly Arg Pro Ile Ser Gly Ser Val Ser Ser Ala
Arg Pro Leu Gly Ser Ser Arg Gly Pro Gly Arg Pro Val Ser Ser Pro
                        135
His Glu Leu Arg Arg Pro Val Ser Gly Leu Gly Pro Pro Gly Arg Ser
                                         155
                    150
Val Ser Gly Pro Gly Arg Ser Ile Ser Gly Pro Ile Pro Ala Gly Arg
```

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175
                165
                                     170
Thr Val Ser Asn Ser Val Pro Gly Arg Pro Val Ser Ser Leu Gly Pro
            180
                                 185
Gly Gln Thr Val Ser Ser Ser Gly Pro Thr Ile Lys Pro Lys Cys
                             200
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<211> 656
<212> DNA
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nnacgcgtga agggcagcag caacaccacg gagtgtgttc ccgtgcccac ctccgagcac
gtggccgaga tcgtgggcag gcaaggctgc aagattaagg ccttgagggc caagaccaac
acctacatta gaaccccggg aaggggcgag gaaccagtgt tcatggtgac agggcgacgg
180
gaggacgtgg ccacagcccg gcgggaaatc atctcagcag cggagcactt ctccatgatc
cgtgcctccc gcaacaagtc aggcgccgcc tttggtgtgg ctcctgctct gcccggccag
gtgaccatcc gtgtgcgggt gccctaccgc gtggtgggc tggtggtggg ccccaaaggg
360
gcaaccatca agegcatcca gcagcaaacc aacacataca ttatcacacc aageegtgac
cgcgaccccg tgttcgagat cacgggtgcc ccaggcaacg tggagcgtgc gcgcgaggag
atcgagacgc acategeggt gegeactgge aagateeteg agtacaacaa tgaaaacgae
ttcctggcgg ggagccccga cgcagcaatc gatagccgct actccgacgc ctggcgggtg
caccagocog gotgoaagoo cototocaco ttooggoaga acagootggg otgoag
656
<210> 2242
<211> 218
<212> PRT
<213> Homo sapiens
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Xaa Arg Val Lys Gly Ser Ser Asn Thr Thr Glu Cys Val Pro Val Pro
                                    10
Thr Ser Glu His Val Ala Glu Ile Val Gly Arg Gln Gly Cys Lys Ile
Lys Ala Leu Arg Ala Lys Thr Asn Thr Tyr Ile Arg Thr Pro Gly Arg
                            40
Gly Glu Glu Pro Val Phe Met Val Thr Gly Arg Arg Glu Asp Val Ala
    50
                                            60
Thr Ala Arg Arg Glu Ile Ile Ser Ala Ala Glu His Phe Ser Met Ile
Arg Ala Ser Arg Asn Lys Ser Gly Ala Ala Phe Gly Val Ala Pro Ala
Leu Pro Gly Gln Val Thr Ile Arg Val Arg Val Pro Tyr Arg Val Val
```

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110
                                105
Gly Leu Val Val Gly Pro Lys Gly Ala Thr Ile Lys Arg Ile Gln Gln
                           120
                                              125
Gln Thr Asn Thr Tyr Ile Ile Thr Pro Ser Arg Asp Arg Asp Pro Val
                                           140
                       135
Phe Glu Ile Thr Gly Ala Pro Gly Asn Val Glu Arg Ala Arg Glu Glu
                   150
                                        155
Ile Glu Thr His Ile Ala Val Arg Thr Gly Lys Ile Leu Glu Tyr Asn
                                                        175
                                    170
Asn Glu Asn Asp Phe Leu Ala Gly Ser Pro Asp Ala Ala Ile Asp Ser
                                185
Arg Tyr Ser Asp Ala Trp Arg Val His Gln Pro Gly Cys Lys Pro Leu
                            200
        195
Ser Thr Phe Arg Gln Asn Ser Leu Gly Cys
                       215
<210> 2243
<211> 384
<212> DNA
<213> Homo sapiens
<400> 2243
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gattcatttc ctggtaagaa tcttctgact tattgagctg catgtcagaa gcaaaaagca
aaaaaaccaa atatgtacat aaaacagtgt tatcattcct taaaagagaa ggaaaataaa
tecetaaata atgtggaetg gaacacagaa atecaagget ggeegeaegg gteetggetg
ggatggcatc cggggagctg ctgctgggga cgtgcttgcc ggcacaggtc aggggagccg
ggttctgcct cctccttgcc cactctcttt gcgccctccc tgtgctcgcc tgtcttgttt
tacctcccat cctgggccct tgga
384
<210> 2244
<211> 108
<212> PRT
<213> Homo sapiens
<400> 2244
Met Gly Gly Lys Thr Arg Gln Ala Ser Thr Gly Arg Ala Gln Arg Glu
Trp Ala Arg Arg Gln Asn Pro Ala Pro Leu Thr Cys Ala Gly Lys
                                25
His Val Pro Ser Ser Ser Pro Asp Ala Ile Pro Ala Arg Thr Arg
                            40
Ala Ala Ser Leu Gly Phe Leu Cys Ser Ser Pro His Tyr Leu Gly Ile
                        55
Tyr Phe Pro Ser Leu Leu Arg Asn Asp Asn Thr Val Leu Cys Thr Tyr
                                        75
                    70
Leu Val Phe Leu Leu Phe Ala Ser Asp Met Gln Leu Asn Lys Ser Glu
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85
                                     90
                                                          95
Asp Ser Tyr Gln Glu Met Asn Pro Gln Ser Phe Ser
             100
                                 105
 <210> 2245
 <211> 632
 <212> DNA
 <213> Homo sapiens
<400> 2245
acgogtgcga ttaccgtcaa ggctggtgtg gtgagcgctg atctgcacqa qcqqacqtct
tegagagaag aggteggaeg egagaggete aactatggte acacettgge ceaegetatt
gaggeccaca agcattteae gtggegteat ggegaggetg aegeggtggg catggtgttt
180
geggeegaae tgtegeaeeg gtaeetggga etgteegatg aggtegttge gegeaeeege
240
actatectgt ctgagategg attgeetgtt acetgtgaeg agattaagtg ggeagatetg
cgcaagacga tgaacgtgga caagaaaacc agggtagacc cgcagaccgg gcgtcaagtg
ttgcggtttg tcggtattca caaacccggt caggtcgcca tgatcgtcga ccctgacgag
geogetttag cogagtgeta cgaccggtgt tccgcacggt aaaaacgttc ggaaatgaac
atgtggctgc gggtcagtcg gcattcaggc ctccgtgacg ccgtcgaccc caagtgatgt
gacgattcgg gaaatatctt gttgggcact cttgagcctc gcctgattcc ccatacccqa
cttaagttca gtatcgacgg catgaatccg ga
632
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<211> 153
<212> PRT
<213> Homo sapiens
<400> 2246
Thr Arg Ala Ile Thr Val Lys Ala Gly Val Val Ser Ala Asp Leu His
                                    10
Glu Arg Thr Ser Ser Arg Glu Glu Val Gly Arg Glu Arg Leu Asn Tyr
Gly His Thr Leu Ala His Ala Ile Glu Ala His Lys His Phe Thr Trp
        35
                            40
Arg His Gly Glu Ala Asp Ala Val Gly Met Val Phe Ala Ala Glu Leu
                        55
Ser His Arg Tyr Leu Gly Leu Ser Asp Glu Val Val Ala Arg Thr Arg
                    70
                                        75
Thr Ile Leu Ser Glu Ile Gly Leu Pro Val Thr Cys Asp Glu Ile Lys
Trp Ala Asp Leu Arg Lys Thr Met Asn Val Asp Lys Lys Thr Arg Val
                                105
Asp Pro Gln Thr Gly Arg Gln Val Leu Arg Phe Val Gly Ile His Lys
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120
       115
Pro Gly Gln Val Ala Met Ile Val Asp Pro Asp Glu Ala Ala Leu Ala
                                            140
                        135
Glu Cys Tyr Asp Arg Cys Ser Ala Arg
                    150
<210> 2247
<211> 324
<212> DNA
<213> Homo sapiens
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gaggttgggc gtggggagtg ccgggtacag tcagagttgc caggacagtt tggagcagtg
120
cetettaate ttggeegeac agcaectggg agetttaaat agaeceecae geeetgggeg
ecceacege tgacceacec gateteaget etgeetttee egeetetetg etgggttgea
taagecageg atteccaace eeggetgtae etggaageta eeccaggage ttetggagaa
tgtgccgtgt gagccatccc cctg
324
<210> 2248
<211> 105
<212> PRT
<213> Homo sapiens
<400> 2248
Met Ala His Thr Ala His Ser Pro Glu Ala Pro Gly Val Ala Ser Arg
                                     10
Tyr Ser Arg Gly Trp Glu Ser Leu Ala Tyr Ala Thr Gln Gln Arg Gly
                                 25
Gly Lys Gly Arg Ala Glu Ile Gly Trp Val Ser Gly Gly Gly Ala Gln
Gly Val Gly Val Tyr Leu Lys Leu Pro Gly Ala Val Arg Pro Arg Leu
                        55
Arg Gly Thr Ala Pro Asn Cys Pro Gly Asn Ser Asp Cys Thr Arg His
                                         75
Ser Pro Arg Pro Thr Ser Leu Leu Pro Leu Gly Arg Leu Ala Ser Ser
                85
Val Gly Glu Asn Pro Gly Gly Glu Arg
                                 105
<210> 2249
<211> 394
<212> DNA
<213> Homo sapiens
gaaaaccgga taacagggtg tatacaagcc tctgagttct gggagcaaca accagctcaa
60
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cccgcaaggg aaagtgagaa agcaattaag ttgggaaccg cggggttttc ccattcccac
 120
 ggtggaaacc gcggccagtg aattgaaatc cgcttcctta aggcgaaatg ggcccttaaa
 aggcaaggte aaccgcccgc cagtgtgatg gaatttgcaa gaattcggtt tagcaccctc
 ceggetttte teeegaeege gtgeagggtg ggetgegetg ggeetgggag gaactgggag
 ctgggggctc atgtcctgta taaaggggct gcaggggcgc tgtctccccc cagaagactq
 gccacatggg gacaggcctc ctgggggcag atct
 394
 <210> 2250
 <211> 104
 <212> PRT
 <213> Homo sapiens
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Met Ser Pro Gln Leu Pro Val Pro Pro Arg Pro Ser Ala Ala His Pro
Ala Arg Gly Arg Glu Lys Ser Arg Glu Gly Ala Lys Pro Asn Ser Cys
                               25
Lys Phe His His Thr Gly Gly Arg Leu Thr Leu Pro Phe Lys Gly Pro
                           40
Phe Arg Leu Lys Glu Ala Asp Phe Asn Ser Leu Ala Ala Val Ser Thr
                                           60
Val Gly Met Gly Lys Pro Arg Gly Ser Gln Leu Asn Cys Phe Leu Thr
                                       75
Phe Pro Cys Gly Leu Ser Trp Leu Leu Leu Pro Glu Leu Arg Gly Leu
                                   90
Tyr Thr Pro Cys Tyr Pro Val Phe
           100
<210> 2251
<211> 654
<212> DNA
<213> Homo sapiens
<400> 2251
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gtggaatagt caggttaaat ttaatgtgac cgtttatcgc aatctgccga ccactcgcga
ttcaatcatg acttcgtgat aaaagattga gtgtgaggtt ataacgccga agcggtaaaa
agtttaatca tgtttcagac ttttatttct cgccataatt caaacttttt ttctgataag
300
ctggttctca cttctgttac tccagcttct tcggcacctg ttttacagac acctaaagct
acategicaa egitatatit tgatagittg aeggitaatg etggitaatgg tggittiett
420
```

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cattgcattc agatggatac atctgtcaac gccgctaatc aggttgtttc tgttggtgct
gatattgett ttgatgeega eeetaaattt tttgeetgtt tggttegett tgagtettet
teggtteega ctaccetece gactgeetat gatgtttate etttggatgg tegecatgat
ggtggttatt ataccgtcaa ggactgtgtg actattgacg teetteeteg tacg
654
<210> 2252
<211> 135
<212> PRT
<213> Homo sapiens
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Met Phe Gln Thr Phe Ile Ser Arg His Asn Ser Asn Phe Phe Ser Asp
Lys Leu Val Leu Thr Ser Val Thr Pro Ala Ser Ser Ala Pro Val Leu
Gln Thr Pro Lys Ala Thr Ser Ser Thr Leu Tyr Phe Asp Ser Leu Thr
                                                 45
Val Asn Ala Gly Asn Gly Gly Phe Leu His Cys Ile Gln Met Asp Thr
Ser Val Asn Ala Ala Asn Gln Val Val Ser Val Gly Ala Asp Ile Ala
                    70
Phe Asp Ala Asp Pro Lys Phe Phe Ala Cys Leu Val Arg Phe Glu Ser
                                     90
Ser Ser Val Pro Thr Thr Leu Pro Thr Ala Tyr Asp Val Tyr Pro Leu
                                105
            100
Asp Gly Arg His Asp Gly Gly Tyr Tyr Thr Val Lys Asp Cys Val Thr
Ile Asp Val Leu Pro Arg Thr
                         135
    130
 <210> 2253
 <211> 327
 <212> DNA
 <213> Homo sapiens
 <400> 2253
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 cactgagcac cagcaagcag gcccgcctgg attgcccacc gggtcacgaa aacgatgaaa
 teggegtatt ggtcaacgte gccaaccage aattegacaa Latggaaace gaaategage
 agegeegeca egeegaggae egeeteaceg aatacetggg ecaactggaa gatategtet
 ccgcacgcac cctggagctc aaggccagca accaacgctt gagccaatcc aacgatgagc
 tggaagegge aaagttgaee geettgg
 327
 <210> 2254
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<211> 100
 <212> PRT
 <213> Homo sapiens
 <400> 2254
 Met Leu Thr Gln Pro Leu Val Arg Ile Ile Arg Ala Leu Ser Thr Ser
Lys Gln Ala Arg Leu Asp Cys Pro Pro Gly His Glu Asn Asp Glu Ile
                                 25
Gly Val Leu Val Asn Val Ala Asn Gln Gln Phe Asp Asn Met Glu Thr
Glu Ile Glu Gln Arg Arg His Ala Glu Asp Arg Leu Thr Glu Tyr Leu
                         55
Gly Gln Leu Glu Asp Ile Val Ser Ala Arg Thr Leu Glu Leu Lys Ala
                     70
                                         75
Ser Asn Gln Arg Leu Ser Gln Ser Asn Asp Glu Leu Glu Ala Ala Lys
                                     90
Leu Thr Ala Leu
            100
<210> 2255
<211> 357
<212> DNA
<213> Homo sapiens
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aatatggctc atgcaacttc tggccaaagg ggtcacattg agcgtgctgc tatcaatgct
cctgtacagg gcagtgcagc tgatgttgct atgtgtgcaa tgcttgagat agacaggaat
actegtetta aggagettgg ttggaegeta etettgeagg tgeatgatga agtgataetg
gaagggcctt cagagtctgc ggagtnggcc aagtccatag ttgttgagtg catgtctaaq
cccttctatg gcaccaatat cctgagggtc gaccttgctg ttgatgcc .a gtgtgca
357
<210> 2256
<211> 119
<212> PRT
<213> Homo sapiens
<400> 2256
Xaa Leu Ala His Glu Lys Cys Glu Val Tyr Thr Leu Leu Gly Arg Ser
Arg Arg Phe Pro Asn Met Ala His Ala Thr Ser Gly Gln Arg Gly His
Ile Glu Arg Ala Ala Ile Asn Ala Pro Val Gln Gly Ser Ala Ala Asp
                            40
Val Ala Met Cys Ala Met Leu Glu Ile Asp Arg Asn Thr Arg Leu Lys
Glu Leu Gly Trp Thr Leu Leu Leu Gln Val His Asp Glu Val Ile Leu
```

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75
                    70
65
Glu Gly Pro Ser Glu Ser Ala Glu Kaa Ala Lys Ser Ile Val Val Glu
                85
Cys Met Ser Lys Pro Phe Tyr Gly Thr Asn Ile Leu Arg Val Asp Leu
                                105
            100
Ala Val Asp Ala Lys Cys Ala
       115
<210> 2257
<211> 626
<212> DNA
<213> Homo sapiens
<400> 2257
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ctgaaaccta aattagaaaa tctgagttct ttaccaccag attctgacag aacatcagaa
gtatatctac atgaagaatt acagcaggac atgcaaaagt ttaagaatga ggtcaacaca
180
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gaagaaatgg agaagcacag aagtaatagc acagaattat caggaaccct aactgatggt
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Asn Tyr Lys Ser Leu Lys Pro Lys Leu Glu Asn Leu Ser Ser Leu Pro
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Pro Asp Ser Asp Arg Thr Ser Glu Val Tyr Leu His Glu Glu Leu Gln
Gln Asp Met Gln Lys Phe Lys Asn Glu Val Asn Thr Leu Glu Glu Glu
Phe Leu Ala Leu Lys Lys Glu Asn Val Gln Leu His Lys Glu Val Glu
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Glu Glu Met Glu Lys His Arg Ser Asn Ser Thr Glu Leu Ser Gly Thr
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Leu Thr Asp Gly Thr Thr Val Gly Asn Asp Asp Gly Leu Asn Gln
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 Gln Ile Pro Arg Lys Glu Asn Glu Glu His Asp Arg Pro Ala Asp Lys
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 Thr Ala Asn Glu Lys Asn Lys Val Lys Asn Gln Ile Tyr Pro Glu Ala
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Asp Phe Ala Asp Ser Met Glu Pro Ser Glu Ile Ala Ser Glu Asp Cys
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Arg Val Leu Tyr Gly Thr Pro Ile Glu Gly Phe Thr Val Asp Lys Ala
Lys Leu Asn Ser Leu Cys Met Val Gly Glu Met Glu Cys Phe Val Gln
Pro Val Glu Asn Asp Pro Ser Val Leu Val Leu Gly Ala Gly His Val
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Ser Arg Ala Ile Thr Asp Leu Leu Leu Phe Ile Gly Cys Arg Val Thr
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Val Val Asp Asp Arg Pro Glu Tyr Val Val Pro Glu Phe Phe Asp Glu
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Arg Val Thr Arg Lys Cys Leu Pro Leu Glu Asn Phe Lys Asn Asp Leu
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Pro Asn Gly Cys Pro Cys Gly Gln Pro Leu Tyr Leu Val Met Gly Arg
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Asn Pro Met Ser Ser Arg Asn Gly Phe Gln Ala Thr Asp Leu Ala Leu
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Ile Ala Val Phe Ala Ala Leu Ile Ala Val Leu Ala Val Ile Pro Pro
Met Phe Met Val Gly Ala Val Pro Phe Ala Leu Gln Met Val Ala Val
                    70
Met Leu Ala Pro Met Val Leu Gly Ser Ile Arg Gly Gly Cys Ala Val
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85
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 Gly Leu Tyr Ile Leu Val Gly Ala Leu Gly Leu Pro Val Phe Ser Gly
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Trp Gly Trp Leu Ile Gly Ala Phe Val Ala Gly
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Ala Met Gly Thr Phe Lys Pro Gly Ala Ala Ala Leu Ala Ile Ser Arg
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Gly Val Pro Val Ile Pro Ile Ala Leu Val Gly Ala Trp Ala Ala Met
Pro Ser Glu Gln Ala Arg Leu Pro Lys Gly Arg Pro Leu Val His Vai
Ala Ile Gly His Pro Met Asp Pro Val Pro Gly Glu Ile Ala His Gln
                                105
Phe Ser Glu Arg Ile Arg Arg Gln Val Ile Glu Leu His Asp Gln Thr
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120
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Ala Arg Ala Tyr Gly Met Pro Thr Leu Asp Glu Tyr Gly Arg His Arg
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Ala Leu Ser Gln Ala Ser Glu Ser Gly Asp Thr Ala Ser Thr Asn His
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Ser Thr Cys
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Ser Gly Lys Ser Gln His Gly Arg His Met Leu Ala Glu Thr Leu Leu
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Glu Leu Pro Leu Ser Ile Asp Ala Tyr His Pro Arg Gly Gly Glu Gly
                             40
Gly Gly Arg Asn Gln Ile Arg Val Gln Asn Ala Pro Glu Gly Leu Gly
                                             60
Asn Val Arg Leu His Leu Ala Gly Thr Val Asn Ala Thr Thr Asn Ile
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                     70
Thr His Leu Arg Gln Ala Leu Glu Ser Ser Cys Glu His Asn Ser Leu
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Thr Pro Asn Leu
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 Trp Gly Val Lys Pro Tyr Pro Pro Lys Thr Ala Val Thr Gly Val Ala
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                             40
 Asn Leu Tyr Arg Asp Arg Leu Lys Ala Thr Ala Thr Gln Gly Thr Glu
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Met Val Lys Gln Ala Cys Pro Lys Ala Ser Leu Leu Asn Pro Asp Leu
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Glu Gly Gln Glu Thr Ser His Leu Arg Met Leu
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giggeeticg ggeateteet igeegagggi aleggegata cealacgegi electigieg
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cctcgaggtc tagagatcgt ctcctgc
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Ile Gly Val Asn Ala Gly Ser Leu Asp Lys Arg Leu Leu Asp Lys Tyr
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Gly Ala Pro Thr Ala Glu Ala Met Val Glu Ser Ala Leu Trp Glu Ala
                        55
Ser Leu Phe Glu Gln Tyr Gly Phe Arg Asp Phe Lys Ile Ser Val Lys
                                        75
                    70
His His Asp Pro Val Val Met Ile Arg Ala Tyr Glu Gln Leu Ala Ala
                                    90
Lys Cys Asp Tyr Pro Leu His Leu Gly Val Thr Glu Ala Gly Pro Ala
                                105
           100
Phe Gln Gly Thr Ile Lys Ser Ala Val Ala Phe Gly His Leu Leu Ala
                                                125
                            120
Glu Gly Ile Gly Asp Thr Ile Arg Val Ser Leu Ser Ala Asp Pro Val
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Glu Glu Val Lys Val Gly Ile Lys Ile Leu Glu Ser Leu Asn Leu Arg
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Pro Arg Gly Leu Glu Ile Val Ser Cys
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420
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Asp Ala Val Ala Arg Leu Ala Thr Tyr Ser Ala Arg Leu Ala Asp His
Gln Gly Arg Val Ser Ala Arg Ile Gly Asp Leu Phe Gln Leu Val Ser
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Glu Ala Asp Phe Ile Arg His Leu Ala Gly Asp Glu Met Thr Asp Ala
                85
                                    90
Gly His Ile Glu Arg Ala Leu Lys Ala Lys Ala Thr Arg Thr Gly Arg
            100
                                105
Val Ser Ala Arg Ile Leu Asp Asp Met Leu Ala Gly Val Ile Leu Ile
                            120
Asp Thr Ala Gly Ala Ala Val Gly Lys Cys Asn Gly Leu Thr Val Leu
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Glu Val Gly Asp Ser Ala Phe Gly Val Pro Ala Arg Ile Ser Ala Thr
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Val Tyr Pro Gly Gly Ser Gly Ile Val Asp Ile Glu Arg Glu Val Asn
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                                    170
Leu Gly Gln Pro Ile His Ser Lys Gly Val Met Ile Leu Thr Gly
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Ile Ala Ser Arg Phe Arg Leu Thr Glu Arg Glu Glu Glu Val Ile Thr
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Cys Phe Glu Arg Ala Ser Trp Ile Ala Gln Val Phe Leu Gln Glu Leu
                        55
Glu Lys Thr Thr Asn Asn Ser Thr Ser Arg His Leu Lys Gly Cys His
                                       75
                    70
Pro Leu Asp Tyr Glu Leu Thr Tyr Phe Leu Glu Ala Ala Leu Gln Ser
                85
                                   90
Ala Tyr Val Lys Asn Leu Lys Lys Gly Asn Ile Val Lys Gly Met Arg
            100
                                105
Glu Leu Arg Glu Val Leu Arg Thr Val Glu Thr Lys Ala Thr Gln Asn
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        115
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Lys Pro Ser Val Ser Ala Phe Thr His Ser Pro Pro Glu Asn Thr Thr
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Gly Ile Ser Ser Thr Ile Ser Phe His Ser Arg Thr Leu Asn Leu Thr
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Asp Val Ile Glu Glu Leu Ala Gln Ala Ser Thr Gln Thr Leu Lys Ser
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Thr Ile Ala Ser Glu Thr Thr Leu Ser Ser Lys Ser His Gln Ser Thr
           100
Thr Thr Arg Lys Ala Ile Ile Arg His Ser Thr Ile Pro Pro Phe Leu
                            120
Ser Ser Ser Ala Thr Leu Ile Pro Val Pro Ile Ser Pro Pro Phe Thr
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Cys Cys Pro Pro Trp Leu Ser Ser Pro Pro Ala Ala Cys Leu Pro Ser
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Ser Leu Leu Ser Pro Tyr Pro Val Leu Pro Ser Pro Ser Cys Lys Val
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                        55
    50
His Ala Thr Pro Gln Glu Glu Pro Gln Arg Leu Ser Ser Asp Pro Thr
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                            40
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Gly Thr Ser Phe Thr Pro Ala Cys Ile Ser Ser Leu Ser His Gly Ser
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Asn Phe Gln Glu Gly Gly Gln Leu Ala Ser Ala Ala Pro Asp Leu Trp
Ile Asp Ala Lys Lys Pro Phe Ser Leu Lys Ala Asp Gly Glu Asn Pro
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 Ser Lys Phe Arg Arg Lys Phe Ile Val Lys Tyr Ser Ala Thr Ser Phe
 Leu Leu Cys His Leu Gly Gly Gly Cys Asn Phe Pro His His Cys Arg
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Ile Val His Pro Val Arg Val Asp Ala Gly Gly Ser Phe Leu Ser Tyr
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Asp Ala Pro Ala Phe Tyr Glu Leu Gln Tyr Arg Gly Arg Glu Leu Arg
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Glu Thr Arg Arg Gly Gly Leu Gly Arg Ala His Ile Arg Ala His
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                                            140
Gly Gly Leu Ala Ala Ile Ser Ala Cys Asp Gly Leu Lys Gly Val Phe
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Met Val Glu Tyr His Gly Gln Pro Gln Val Glu Ser Tyr Val Leu Thr
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Ile Met Asn Met Val Ala Gly Leu Phe His Asp Pro Ser Ile Gly Asn
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Glu Asp Leu Lys Ile Thr His His Ala Asp Asn Thr Leu Lys Ser Phe
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Cys Lys Trp Gln Lys Ser Ile Asn Met Lys Gly Asp Ala His Pro Leu
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His His Asp Thr Ala Ile Leu Leu Thr Arg Lys Asp Leu Cys Ala Ala
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Met Asn Arg Pro Cys Glu Thr Leu Gly Leu Ser His Val Ala Gly Met
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Cys Gln Pro His Arg Ser Cys Ser Ile Asn Glu Asp Thr Gly Leu Pro
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Gly Thr Phe Xaa Arg Arg Pro Arg Val Xaa Gly Tyr Val Asp Val Gly
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	1250)		_		125	,	C 0 W	~~	Dro		-	Ser	Thr	Asp
		Leu	GIA	Leu			Leu	261	тър	127	e L	Val	-		1280
1265	5			_	127		D	~1	C			Acn	Dhe	Pro	
Gly	Leu	Gln	Thr			Thr	Pro	GIU	200	V GTII	ASII	Asp		129	5
				128	5		-		129		Two	7 ~~	yen		
Gly	Lys	Asp			Ser	GID	Leu			PIO	пр	Arg	131	ູ້	****
			130	0		_	_,	130		T	C1.4	N			Pro
Asn	Glu			Lys	Asp	Asp			Pro	Lys	GIY	Arg	- GIY	AIG	
		131	5				132		_	_		132		Dwa	Wal.
His	Leu	Pro	Pro	Arg	Pro			Thr	Leu	Pro	Pro	Leu	Ser	PLO	Val
	133	0				133	5				134				m b
Gly	Ser	Thr	His	Ser	Ser	Pro	Ser	Pro	Asp	Val	Ala	GIU	Leu	Trp	Thr
134	5	•			135	0				135				-1	1360
Gly	Gly	Thr	Val	Ala	Trp	Glu	Pro	Ala	Leu	Glu	Gly	GIA	Leu	GIY	Pro
				136	5				137				_	137	
Val	Asp	Ser	Glu	Leu	Trp	Pro	Thr	Val	Gly	· Val	Ala	Ser	Leu	Leu	Pro
			138	0				138	5				139	0	
Pro	Pro	Ile	Ala	Pro	Leu	Pro	Glu	Met	Lys	Val	Arg	Asp	Ser	Ser	Leu
		139	5				140	0				140	5		
Glu	Pro	Glv	Thr	Pro	Ser	Phe	Pro	Ala	Pro	Gly	Pro	Gly	Ser	Trp	Asp
-	141					141			•		142	0			
Len	Gln	Thr	·Val	Ala	Val			Thr	Phe	Lev	Pro	Thr	Thr	Leu	Thr
142					143		•			143	15				1440
C) v	יים יים	เดาจ	His	Met			Pro	Ala	Lev	ı Asr	Pro	Gly	Pro	Lys	Gly
GIY	n∉ n	. .		144					145	0		•		145	55
C1-	D~~	۰ د دی	Car			Pro	Gli	ı Val			ı Ser	Ser	Arc	Lev	1 Leu
GID	PIC	, 611	146		. JEI		, 516	146					147	70	
C	. ~~-	. n				, ca-	- Pro			ser	r His	arc	-		Glu
ser	Ini			·p	, wat	, 561	148					148	35		
		147	. T ^.	, ,,,_	, n				e Gli	: ומנ	e Gly			ala	a Asp
IUI	LLD	LLC	, שכו	· wrg		, 501						,			-

300

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1490
                       1495
Pro Leu Val Val Arg Asn Ala Ser Trp Gln Ala Gly Asn Trp Ser Glu
                   1510
                                       1515
Cys Ser Thr Thr Cys Gly Leu Gly Ala Val Trp Arg Pro Val Arg Cys
                1525
                                   1530
                                                      1535
Ser Ser Gly Arg Asp Glu Asp Cys Ala Pro Ala Gly Arg Pro Gln Pro
           1540
                               1545
Ala Arg Arg Cys His Leu Arg Pro Cys Ala Thr Trp His Ser Gly Asn
      1555
                          1560
                                             1565
Trp Ser Lys Cys Ser Arg Ser Cys Gly Gly Ser Ser Val Arg Asp
                       1575
                                          1580
Val Gln Cys Val Asp Thr Arg Asp Leu Arg Pro Leu Arg Pro Phe His
                  1590
                                      1595
Cys Gln Pro Gly Pro Ala Lys Pro Pro Ala His Arg Pro Cys Gly Ala
                                  1610
Gln Pro Cys Leu Ser Trp Tyr Thr Ser Ser Trp Arg Glu Cys Ser Glu
           1620
                               1625
                                                  1630
Ala Cys Gly Gly Glu Gln Gln Arg Leu Val Thr Cys Pro Glu Pro
                           1640
                                              1645
Gly Leu Cys Glu Glu Ala Leu Arg Pro Asn Thr Thr Arg Pro Cys Asn
                       1655
                                          1660
Thr His Pro Cys Thr Gln Trp Val Val Gly Pro Trp Gly Gln Cys Ser
                                      1675
                  1670
Ala Pro Cys Gly Gly Val Gln Arg Leu Val Lys Cys Val Asn
               1685
                                  1690
Thr Gln Thr Gly Leu Pro Glu Glu Asp Ser Asp Gln Cys Gly His Glu
           1700
                              1705
Ala Trp Pro Glu Ser Ser Arg Pro Cys Gly Thr Glu Asp Cys Glu Pro
                          1720
                                              1725
Val Glu Pro Pro Arg Cys Glu Arg Asp Arg Leu Ser Phe Gly Phe Cys
    1730
                      1735
                                          1740
Glu Thr Leu Arg Leu Leu Gly Arg Cys Gln Leu Pro Thr Ile Arg Thr
                  1750
                                     1755
Gln Cys Cys Arg Ser Cys Ser Pro Pro Ser His Gly Ala Pro Ser Arg
               1765
                                  1770
Gly His Gln Arg Val Ala Arg Arg
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tggcctataa aagtatcatc atccccattt tacagaatgg gaaagtaagg cgtggggagg
ttgaggacat ttgtacagag tcaggtaact ggaggaactg gactacaacc ctgctcagtg
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cagccagtgt gactgagcgc ctcctgagag ccaggtggat tctgccctca aggatccatg

ctctgggcaa gaaacccacc catcagcagg tggcttctgc tgagccacaa caggcacaca

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gaggggtcca tgggagccca gaggggagca tctgaccagg ctcaggggaa ggaatgtgtc
cagcagagtc acagaggagc agtatgagtt agccaggtag gggacattcc aggcagggga
gcagcaggac aaaagcatag aggtagcact gccagtgcca agttccaaaa taagaggctg
actgctacag ggtccatata ggaaaataat gggaaataca tttggacagg aggtggggtc
tgtaacaaag gactttaatt ccaggttaag gaatctggat gttaaaacaa cattagctgc
catttctaca gtgctacttc ccaggctctg tgcctttctg ggagccttga aggtttgtga
gctggaagga gatattagga acaaaacgat gcatgaggat agctcaggta aaggttattg
ataagtaaga atgcctggca ccaaacgcgt
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<210> 2288
<211> 142
<212> PRT
<213> Homo sapiens
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Lys Ser Phe Val Thr Asp Pro Thr Ser Cys Pro Asn Val Phe Pro Ile
                                25
            20
Ile Phe Leu Tyr Gly Pro Cys Ser Ser Gln Pro Leu Ile Leu Glu Leu
                            40
Gly Thr Gly Ser Ala Thr Ser Met Leu Leu Ser Cys Cys Ser Pro Ala
                        55
Trp Asn Val Pro Tyr Leu Ala Asn Ser Tyr Cys Ser Ser Val Thr Leu
                                         75
                    70
Leu Asp Thr Phe Leu Pro Leu Ser Leu Val Arg Cys Ser Pro Leu Gly
                                     90
Ser His Gly Pro Leu Cys Val Pro Val Val Ala Gln Gln Lys Pro Pro
                                 105
            100
Ala Asp Gly Trp Val Ser Cys Pro Glu His Gly Ser Leu Arg Ala Glu
                            120
Ser Thr Trp Leu Ser Gly Gly Ala Gln Ser His Trp Leu His
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    130
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 ccgagcgccg ccgcctccgg catggatcat tgcgtgacgg tggagcgcga gctggagaag
 gtgctgcaca agttctcggg ctacgggcag ctgtgcgagc gcggcctgga ggagctcatc
 180
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gactacaccg gcggtctcaa gcaccagatc ctgcagagcc acggccaaga tgctgaatta
240
tcagggacac tttcacttgt tttgacacag ggctgtaaaa gaataanaag gggatactgg
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ccattgatga ggattcactt t
381
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Lys Phe Ser Gly Tyr Gly Gln Leu Cys Glu Arg Gly Leu Glu Glu Leu
            20
                                25
Ile Asp Tyr Thr Gly Gly Leu Lys His Gln Ile Leu Gln Ser His Gly
Gln Asp Ala Glu Leu Ser Gly Thr Leu Ser Leu Val Leu Thr Gln Gly
                        55
Cys Lys Arg Ile Xaa Arg Gly Tyr Trp Phe Lys Asn Trp Pro Pro Thr
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Thr Lys Thr Ser Thr Ala Val Phe Leu Gly Leu Glu Lys Pro Leu Met
Arg Ile His Phe
            100
<210> 2291
<211> 573
<212> DNA
<213> Homo sapiens
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aagtggtcga tagaagcccc agccggctta agccagttct ggaaaaccac cacatatcgc
acatgttcgt tgtgacgatg cagctgagcc attgaatcga cggtcagcgc catgaacgcc
cgatgetegt tgaeggtaag actegeegae ceageaaegt eggeggttgt egtgeeetea
teggtgtaat ggegacgage gacgatgaeg teatgteege eggeaaagaa ggetgeggaa
geotegegta attettgggg accgaggtee teggegegee ggtetgacee cacegcettg
aacttggcgt taaggaccga cctcacgtga gcctcccctg acgggttaga caggtattcc
tectgecagt coegegetge ecgaggeaag eteatecece agttgagetg ecaatacege
540
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cacgacagga tctcgaaaag attggggacg cgt
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<211> 140
<212> PRT
<213> Homo sapiens
<400> 2292
Met Ser Leu Pro Arg Ala Ala Arg Asp Trp Gln Glu Glu Tyr Leu Ser
                 5
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Asn Pro Ser Gly Glu Ala His Val Arg Ser Val Leu Asn Ala Lys Phe
                                25
Lys Ala Val Gly Ser Asp Arg Ala Glu Asp Leu Gly Pro Gln Glu
                            40
Leu Arg Glu Ala Ser Ala Ala Phe Phe Ala Gly Gly His Asp Val Ile
Val Ala Arg Arg His Tyr Thr Asp Glu Gly Thr Thr Ala Asp Val
                                        75
Ala Gly Ser Ala Ser Leu Thr Val Asn Glu His Arg Ala Phe Met Ala
                                    90
                85
Leu Thr Val Asp Ser Met Ala Gln Leu His Arg His Asn Glu His Val
                                105
Arg Tyr Val Val Val Phe Gln Asn Trp Leu Lys Pro Ala Gly Ala Ser
                          . 120
Ile Asp His Leu His Lys Gln Val Val Ala Ile Asp
    130
                        135
<210> 2293
<211> 358
<212> DNA
<213> Homo sapiens
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gtgaacactg tcgctaagaa ctggttgaac cggctcaaca cgccggatat gaaacccact
gaggagatca agcggcagtt ccaaggtctg cattggttgg gacgtaagta tgggctcaac
cacggagagt totatottga cgacgagcag tgggccacgc tcatggccgg gtcctctttc
gaggcgaatc cgcgcattaa gagcaacttt gattccgagg gcgctgttgt ggatccggat
tecgatteae ttgetgggge tgategagat geeegaggtg etteggatge atgeette
358
<210> 2294
<211> 115
<212> PRT
<213> Homo sapiens
<400> 2294
Met Glu Ala Ala Leu Val Gly Ala His Lys Thr Gly Gly Cys Pro Leu
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10
Val Asn Thr Val Ala Lys Asn Trp Leu Asn Arg Leu Asn Thr Pro Asp
                                25
Met Lys Pro Thr Glu Glu Ile Lys Arg Gln Phe Gln Gly Leu His Trp
Leu Gly Arg Lys Tyr Gly Leu Asn His Gly Glu Phe Tyr Leu Asp Asp
                        55
Glu Gln Trp Ala Thr Leu Met Ala Gly Ser Ser Phe Glu Ala Asn Pro
                                        75
Arg Ile Lys Ser Asn Phe Asp Ser Glu Gly Ala Val Val Asp Pro Asp
Ser Asp Ser Leu Ala Gly Ala Asp Arg Asp Ala Arg Gly Ala Ser Asp
Ala Cys Leu
        115
<210> 2295
<211> 546
<212> DNA
<213> Homo sapiens
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ggggcgtatg gctgctcggt cattaccgca ctggtagcgc aaaatacgcg cggcgtgcag
teggtgtate gtategaace ggattttgte ggtgcacaac tggactetgt gttcagegat
gtccgcattg attccaccaa aatcggcatg ctggcagagg cggatatcgt ggaagcggtc
geggagegee teaaacatta tegegttaaa aacgtggtae ttgataeggt gatgetggeg
300
aaaagtggcg atccgctgct atctcctgct gctgtcgaaa ctctgcgaaa acaccttctg
ccacacgtcg cgctgatcac gccaaatttg ccggaggcgg cggcgctgct ggatgcgct
catgcccgta ccgagcacga gatgaaagag caggggcgcg cacttctggc gcttggctgc
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540
acgcgt
546
<210> 2296
<211> 182
<212> PRT
<213> Homo sapiens
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Gly Thr Asp Pro Ser Gly Gly Ala Gly Ile Arg Xaa Asp Leu Xaa Thr
1
                 5
Phe Ser Ala Leu Gly Ala Tyr Gly Cys Ser Val Ile Thr Ala Leu Val
                                25
Ala Gln Asn Thr Arg Gly Val Gln Ser Val Tyr Arg Ile Glu Pro Asp
```

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45
                          40
Phe Val Gly Ala Gln Leu Asp Ser Val Phe Ser Asp Val Arg Ile Asp
                       55
Ser Thr Lys Ile Gly Met Leu Ala Glu Ala Asp Ile Val Glu Ala Val
                   70
Ala Glu Arg Leu Lys His Tyr Arg Val Lys Asn Val Val Leu Asp Thr
                                  90
Val Met Leu Ala Lys Ser Gly Asp Pro Leu Leu Ser Pro Ala Ala Val
                                                 110
                              105
Glu Thr Leu Arg Lys His Leu Leu Pro His Val Ala Leu Ile Thr Pro
                           120
       115
Asn Leu Pro Glu Ala Ala Ala Leu Leu Asp Ala Pro His Ala Arg Thr
                                          140
                       135
Glu His Glu Met Lys Glu Gln Gly Arg Ala Leu Leu Ala Leu Gly Cys
                                      155
                   150
Glu Ala Val Leu Met Lys Gly Gly His Leu Asp Asp Pro Glu Ser Pro
                                  170
               165
Asp Trp Leu Phe Thr Arg
           180
<210> 2297
<211> 414
<212> DNA
<213> Homo sapiens
<400> 2297
gggaattccg ggcccttccc cccaagcccg ggtaattttt tgtattttta aaaaaaaagg
gaatttteec acgttggggg gggggggttc ggactttttc ccccaaaaac ccccccccc
120
aaaggaaaaa ccccttttt tttttttt ttttatacac atgagggtct ctggttaata
aatgttgaga tgtagggtta ggtgagatta aacaggttct ttttttcatg atttctcgga
gtetttatga tgetecacae cagtaettet caaagetgae tgtgtataca aaacaetggg
gatctgaccc acatgtaaag tctgatttct ttggtctggg gcaggcctga aatn
 <210> 2298
 <211> 67
 <212> PRT
 <213> Homo sapiens
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 Lys Lys Arg Glu Phe Ser His Val Gly Gly Gly Phe Gly Leu Phe
 Pro Pro Lys Thr Pro Pro Pro His Pro Pro Lys Gly Arg Lys Ala Gly
            20
 Pro Lys Pro Pro Gly Pro Pro Pro Gly Gly Ala Lys Gly Lys Thr Pro
                            40
 Phe Phe Phe Phe Phe Tyr Thr His Glu Gly Leu Trp Leu Ile Asn
```

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50
                         55
                                             60
 Val Glu Met
 65
 <210> 2299
 <211> 987
 <212> DNA
 <213> Homo sapiens
 <400> 2299
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 ccgctttcac tcttcgaatt tgtgcttagc tcttttcttg taccctgcga ctcgtgacca
 acatgctgtg atgtgtgccg agggaggaat tggtcagcta cacaacctgg atcttaccac
 agtttggata tgactgaggc tctccaatgg gccagatatc actggcgacg gctgatcaga
 ggtgcaacca gggatgatga ttcagggcca tacaactatt cetegttget egectgtggg
 300
 cgcaagtcct ctcagatccc taaactgtca ggaaggcacc ggattgttgt tccccacatc
cagecettea aggatgagta tgagaagtte teeggageet atgtgaacaa tegaataega
 420
acaacaaagt acacacttct gaattttgtg ccaagaaatt tatttgaaca atttcacaga
gctgccaatt tatatttcct gttcctagtt gtcctgaact gggtaccttt ggtagaagcc
ttccaaaagg aaatcaccat gttgcctctg gtggtggtcc ttacaattat cqcaattaaa
gatggcctgg aagattatcg gaaatacaaa attgacaaac agatcaataa tttaataact
aaagtttata gtaggaaaga gaaaaaatac attgaccgat gctggaaaga cgttactgtt
ggggacttta ttcgcctctc ctgcaacgag gtcatccctg cagacatggt actactcttt
tccactgatc cagatggaat ctgtcacatt gagacttctg gtcttgatgg agagagcaat
ttaaaacaga ggcaggtggt tcggggatat gcagaacagg actctgaagt tgatcctgag
aagttttcca gtaggataga atgtgaaagc ccaaacaatg acctcagcag attccgaggc
ttcctagaac attccaacaa agaacgc
987
<210> 2300
<211> 266
<212> PRT
<213> Homo sapiens
<400> 2300
Met Thr Glu Ala Leu Gln Trp Ala Arg Tyr His Trp Arg Arg Leu Ile
                                    10
Arg Gly Ala Thr Arg Asp Asp Ser Gly Pro Tyr Asn Tyr Ser Ser
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25
            20
Leu Leu Ala Cys Gly Arg Lys Ser Ser Gln Ile Pro Lys Leu Ser Gly
                            40
Arg His Arg Ile Val Val Pro His Ile Gln Pro Phe Lys Asp Glu Tyr
                                            60
                        55
Glu Lys Phe Ser Gly Ala Tyr Val Asn Asn Arg Ile Arg Thr Thr Lys
                                        75
                    70
Tyr Thr Leu Leu Asn Phe Val Pro Arg Asn Leu Phe Glu Gln Phe His
                                    90
                85
Arg Ala Ala Asn Leu Tyr Phe Leu Phe Leu Val Val Leu Asn Trp Val
                                105
Pro Leu Val Glu Ala Phe Gln Lys Glu Ile Thr Met Leu Pro Leu Val
                           120
Val Val Leu Thr Ile Ile Ala Ile Lys Asp Gly Leu Glu Asp Tyr Arg
Lys Tyr Lys Ile Asp Lys Gln Ile Asn Asn Leu Ile Thr Lys Val Tyr
                    150
Ser Arg Lys Glu Lys Lys Tyr Ile Asp Arg Cys Trp Lys Asp Val Thr
                                    170
                165
Val Gly Asp Phe Ile Arg Leu Ser Cys Asn Glu Val Ile Pro Ala Asp
                                185
            180
Met Val Leu Leu Phe Ser Thr Asp Pro Asp Gly Ile Cys His Ile Glu
                                                 205
                            200
Thr Ser Gly Leu Asp Gly Glu Ser Asn Leu Lys Gln Arg Gln Val Val
                                             220
                        215
Arg Gly Tyr Ala Glu Gln Asp Ser Glu Val Asp Pro Glu Lys Phe Ser
                                         235
                    230
Ser Arg Ile Glu Cys Glu Ser Pro Asn Asn Asp Leu Ser Arg Phe Arg
                                    250
                245
Gly Phe Leu Glu His Ser Asn Lys Glu Arg
            260
<210> 2301
<211> 390
<212> DNA
<213> Homo sapiens
<400> 2301
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nnegecacet etteegegna ttteeetgaa geetgegata acaetatgga aategetgag
nncgttgcca cgttgaattc aacacaaacg caanactaca tgcccgattt ccccaccccg
gagggggaga atgaggaatc ctggttcgtc aaagaagttg aacgcggttt gcactaccga
ttccccgagg gcattcccga tgacgtacgc aagcaggcag attatgaagt agggattatt
acccagatgg gattccccgg ctacttcttg gtggtcgcgg attttatcaa ctgggcgaag
aataacggaa ttcgagtggg ccccgggcgt
390
 <210> 2302
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<211> 130
<212> PRT
<213> Homo sapiens
<400> 2302
Tyr Pro Lys Arg Phe Lys Phe Asp Ala Asp Glu Phe Tyr Leu Lys Ser
Ser Glu Glu Met Xaa Ala Thr Ser Ser Ala Xaa Phe Pro Glu Ala Cys
Asp Asn Thr Met Glu Ile Ala Glu Xaa Val Ala Thr Leu Asn Ser Thr
                             40
Gln Thr Gln Xaa Tyr Met Pro Asp Phe Pro Thr Pro Glu Gly Glu Asn
Glu Glu Ser Trp Phe Val Lys Glu Val Glu Arg Gly Leu His Tyr Arg
                    70
                                         75
Phe Pro Glu Gly Ile Pro Asp Asp Val Arg Lys Gln Ala Asp Tyr Glu
Val Gly Ile Ile Thr Gln Met Gly Phe Pro Gly Tyr Phe Leu Val Val
                                105
Ala Asp Phe Ile Asn Trp Ala Lys Asn Asn Gly Ile Arg Val Gly Pro
                            120
Gly Arg
    130
<210> 2303
<211> 638
<212> DNA
<213> Homo sapiens
<400> 2303
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gcacctgtgt ttggctacct gggcgaccga catagccgca aggctaccat gagcttcggt
atcttgctgt ggtcaggagc tggcctctct agctccttca tctcccccg gtattcttgg
ctettettee tgteeegggg categagge aetggetegg ceagetacte caecategeg
240
cccaccgtcc tgggcgacct cttcgtgagg gaccagcgca cccgcgtgct ggctgtcttc
300
tacatettta teecegttgg aagtggtetg ggetaegtge tggggtegge tgtgaegatg
ctgactggga actggcgctg ggccctccga gtcatgccct gcctggaggc cgtggccttg
atcctgctta tcctgctggt tccagaccca ccccggggag ctgccgagac acagggggag
ggggccgtgg gaggcttcag aagcagctgg tgtgaggacg tcagatacct ggggaaaaac
tggagttttg tgtggtegac ceteggagtg accgecatgg cetttgtgac tggagecetg
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638
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<210> 2304

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<211> 212
<212> PRT
<213> Homo sapiens
<400> 2304
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                5
Leu Leu Ser Ala Pro Val Phe Gly Tyr Leu Gly Asp Arg His Ser
                                25
Arg Lys Ala Thr Met Ser Phe Gly Ile Leu Leu Trp Ser Gly Ala Gly
                            40
Leu Ser Ser Ser Phe Ile Ser Pro Arg Tyr Ser Trp Leu Phe Phe Leu
                        55
Ser Arg Gly Ile Glu Gly Thr Gly Ser Ala Ser Tyr Ser Thr Ile Ala
                                        75
                    70
Pro Thr Val Leu Gly Asp Leu Phe Val Arg Asp Gln Arg Thr Arg Val
                                    90
Leu Ala Val Phe Tyr Ile Phe Ile Pro Val Gly Ser Gly Leu Gly Tyr
           100
                                105
Val Leu Gly Ser Ala Val Thr Met Leu Thr Gly Asn Trp Arg Trp Ala
                                                125
                            120
Leu Arg Val Met Pro Cys Leu Glu Ala Val Ala Leu Ile Leu Leu Ile
                                            140
                       135
Leu Leu Val Pro Asp Pro Pro Arg Gly Ala Ala Glu Thr Gln Gly Glu
                                        155
                    150
Gly Ala Val Gly Gly Phe Arg Ser Ser Trp Cys Glu Asp Val Arg Tyr
                                    170
Leu Gly Lys Asn Trp Ser Phe Val Trp Ser Thr Leu Gly Val Thr Ala
                                185
Met Ala Phe Val Thr Gly Ala Leu Gly Phe Trp Ala Pro Lys Phe Leu
                                                205
                            200
       195
Leu Glu Ala Arg
    210
<210> 2305
<211> 340
<212> DNA
<213> Homo sapiens
<400> 2305
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toggaccago acaetttgae ogtogtggto gootogtgae atggggtaac gogaacotog
togeteetgt tettgacete tteegtgeee ceattgacaa egategggea agtteaetgg
cccgcaacgc tattggtgac gcagcactcg cagctggtct cgaccgactc gtccacacca
cggcgtcggt gcgcgacgag ggcgatgagt tggtcgtcgt tactcgcagc gctgctgccg
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340
<210> 2306
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<211> 101
  <212> PRT
  <213> Homo sapiens
 <400> 2306
 Met Glu Leu Arg Ala Ala Ala Ala Leu Arg Val Thr Thr Asn
                                      10
 Ser Ser Pro Ser Ser Arg Thr Asp Ala Val Val Trp Thr Ser Arg Ser
             20
                                 25
 Arg Pro Ala Ala Ser Ala Ala Ser Pro Ile Ala Leu Arg Ala Ser Glu
 Leu Ala Arg Ser Leu Ser Met Gly Ala Arg Lys Arg Ser Arg Thr Gly
 Ala Thr Arg Phe Ala Leu Pro His Val Thr Arg Arg Pro Arg Arg Ser
                     70
 Lys Cys Ala Gly Pro Arg Leu Gln Pro Val Pro Ser Arg Cys Asp Cys
                                     90
 Asp Asp Ala Gly Arg
            100
 <210> 2307
 <211> 360
 <212> DNA
 <213> Homo sapiens
 <400> 2307
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gccaaggcac tgggtggggc tggcagtggg agcaagggct cagcaggtgg cggaagcaag
cgacggctga gcagcgaaga cagctccctg gagccagacc tggccgagat gagcctggat
gacagcagee tggeeetggg egeagaggee aggaeetteg ggggatteee tgagageeet
ccaccetgte etetecaegg tggetecega ggecetteca ettteettee tgageeecea
gatacttatg aagaagatgg tgatgagagt ggcaatgggc ttcccaaaac caaagaggca
360
<210> 2308
<211> 120
<212> PRT
<213> Homo sapiens
<400> 2308
Xaa Phe Ser Ala Glu Gly Gly Asp Lys Ala Leu His Lys Met Gly Pro
Gly Gly Gly Lys Ala Lys Ala Leu Gly Gly Ala Gly Ser Gly Ser Lys
Gly Ser Ala Gly Gly Gly Ser Lys Arg Arg Leu Ser Ser Glu Asp Ser
                            40
Ser Leu Glu Pro Asp Leu Ala Glu Met Ser Leu Asp Asp Ser Ser Leu
Ala Leu Gly Ala Glu Ala Arg Thr Phe Gly Gly Phe Pro Glu Ser Pro
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75
Pro Pro Cys Pro Leu His Gly Gly Ser Arg Gly Pro Ser Thr Phe Leu
                                    90
               85
Pro Glu Pro Pro Asp Thr Tyr Glu Glu Asp Gly Asp Glu Ser Gly Asn
                                105
           100
Gly Leu Pro Lys Thr Lys Glu Ala
<210> 2309
<211> 395
<212> DNA
<213> Homo sapiens
<400> 2309
ggatecetae aaatggggee etgetetgag cacatteeea tgagggetge etgeeetgtg
cactetetge cetgggeege ggggeetgae tgggtteeca ceteeteeta eccaetgggg
tettttccag caggcacagg gattectcat gggggaggca gageccacec gtetgteete
ggtgacggcc tgagctgtgc acggcctccc ctgccctcct gttctcaggc cccccagggt
ccatccagcc ccagcgtgtg gcgttctggc tcttccctgg agtctcctcc cagaccacgc
gactccactc acactgtgcc tagcggactg tgtggttgat gcagccggct cacttgagtg
tgttgtgtta tgcccacaac aggcttgccg tcacc
395
<210> 2310
<211> 108
<212> PRT
<213> Homo sapiens
 <400> 2310
Met Gly Pro Cys Ser Glu His Ile Pro Met Arg Ala Ala Cys Pro Val
                                     10
His Ser Leu Pro Trp Ala Ala Gly Pro Asp Trp Val Pro Thr Ser Ser
                                 25
 Tyr Pro Leu Gly Ser Phe Pro Ala Gly Thr Gly Ile Pro His Gly Gly
                             40
 Gly Arg Ala His Pro Ser Val Leu Gly Asp Gly Leu Ser Cys Ala Arg
                         55
 Pro Pro Leu Pro Ser Cys Ser Gln Ala Pro Gln Gly Pro Ser Ser Pro
                                         75
 Ser Val Trp Arg Ser Gly Ser Ser Leu Glu Ser Pro Pro Arg Pro Arg
                                     90
                 85
 Asp Ser Thr His Thr Val Pro Ser Gly Leu Cys Gly
                                 105
 <210> 2311
 <211> 378
 <212> DNA
 <213> Homo sapiens
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<400> 2311
 gtgcacgccg agatgctgcc gcaagacaag cagcgtgtcg tcggcgagtt gaagcgccag
 ggetteteag tgateaaggt eggegatgge ateaatgatt gegacgetet egeeqeqeq
gatgtcggca gtcccatggg cggcagcgcg gacgtggctc tcgaaacggc cgatgctgcc
 gtccttcacg gacgggtggg ggacgtcttc gcgatgatcg ccctatcgaa gcgaaccatg
gccaacattc gacagaacat cgcgatcgcg atcgggctaa aggcggtgtt ccttgtaacg
 accytcytcy gcatcacygy yctttyycct ycaatcctcy ccyatacygy yaccacygay
 cttgtgacca tgaacgcg
378
<210>.2312
<211> 126
<212> PRT
<213> Homo sapiens
<400> 2312
Val His Ala Glu Met Leu Pro Gln Asp Lys Gln Arg Val Val Gly Glu
Leu Lys Arg Gln Gly Phe Ser Val Ile Lys Val Gly Asp Gly Ile Asn
                                25
Asp Cys Asp Ala Leu Ala Ala Ala Asp Val Gly Ser Pro Met Gly Gly
                            40
Ser Ala Asp Val Ala Leu Glu Thr Ala Asp Ala Ala Val Leu His Gly
                                             60
Arg Val Gly Asp Val Phe Ala Met Ile Ala Leu Ser Lys Arg Thr Met
                    70
Ala Asn Ile Arg Gln Asn Ile Ala Ile Ala Ile Gly Leu Lys Ala Val
Phe Leu Val Thr Thr Val Val Gly Ile Thr Gly Leu Trp Pro Ala Ile
                                105
Leu Ala Asp Thr Gly Thr Thr Glu Leu Val Thr Met Asn Ala
        115
                            120
<210> 2313
<211> 669
<212> DNA
<213> Homo sapiens
<400> 2313
ctagtggcat ggtctcgctg gtctttagtg gagcataccg acacatcggt gactcaaacg
atccgaatca tggctcgtcc tggttggcct ggaaccatta acgtacgcct cacccatcgc
ttaagcgacg ccggtctagc tgtcgaagtc accgcgcgca atgtcggtac gacagcgggg
ccgcttggat acgcagcaca cccctatctc tgtctgggtg gcaccatcga cgactggaca
240
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gtcgacgccc cgtttacctc gtggttacag gtcgatgatc ggctgctacc aatgcagatg
cgcgagatgg acagcatcca cgcgctgaac ggtctcacgg gcggacagcg caccttcgat
accgcttaca ccgtgaaagg aggacggaac cgtcggatcg cccgcatggc gtatccgggt
ctcaacggtg aaacgagcca cgaattgtgg ggcgacgccg cgatgagctg ggtgcaagtc
tacactccag acgaccgcca cagtctggcc atcgagccaa tgacctgcgg cccagatgca
tttaatgagg gecegaecea eggtgaegte attegaetgg ageceggtaa tgaegteaca
ctgcactggg gcatcgccta acccgcggaa gctcgaaagg acaaggacgg gaaggcagga
ttcacgcgt
669
<210> 2314
<211> 206
<212> PRT
<213> Homo sapiens
<400> 2314
Leu Val Ala Trp Ser Arg Trp Ser Leu Val Glu His Thr Asp Thr Ser
                                    10
Val Thr Gln Thr Ile Arg Ile Met Ala Arg Pro Gly Trp Pro Gly Thr
                                25
            20
Ile Asn Val Arg Leu Thr His Arg Leu Ser Asp Ala Gly Leu Ala Val
Glu Val Thr Ala Arg Asn Val Gly Thr Thr Ala Gly Pro Leu Gly Tyr
Ala Ala His Pro Tyr Leu Cys Leu Gly Gly Thr Ile Asp Asp Trp Thr
                                         75
                    70
Val Asp Ala Pro Phe Thr Ser Trp Leu Gln Val Asp Asp Arg Leu Leu
                85
Pro Met Gln Met Arg Glu Met Asp Ser Ile His Ala Leu Asn Gly Leu
                                105
            100
Thr Gly Gly Gln Arg Thr Phe Asp Thr Ala Tyr Thr Val Lys Gly Gly
                                                 125
                            120
Arg Asn Arg Arg Ile Ala Arg Met Ala Tyr Pro Gly Leu Asn Gly Glu
                                             140
                        135
Thr Ser His Glu Leu Trp Gly Asp Ala Ala Met Ser Trp Val Gln Val
                    150
                                         155
Tyr Thr Pro Asp Asp Arg His Ser Leu Ala Ile Glu Pro Met Thr Cys
                                     170
Gly Pro Asp Ala Phe Asn Glu Gly Pro Thr His Gly Asp Val Ile Arg
                                 185
            180
Leu Glu Pro Gly Asn Asp Val Thr Leu His Trp Gly Ile Ala
                             200
 <210> 2315
 <211> 546
 <212> DNA
 <213> Homo sapiens
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<400> 2315
 nacgcgtccc tcatcgatac cgagcccggg atgggaaaac gggtgtatcg cgttgaggcc
 acccaaggcc gaccaattcg catcgataag geggtegett atcacacttc tegeggegtg
 120
 ccggtacatg aactgtttga ccgagtgcgc cgcagcttag accgagtgcg tgaacagggg
 cacaacgtct actacgacga acagcgtgca tggcttgacg attactgggc aacggctgat
 gttgaggtcg agggtgcccc gaccggtatt cagcaggctg tcaggtggaa ccttttccag
attgctcagg catcagcccg tgcagatcaa cttggcattc cggcaaaggg tgtaaccggg
traggetatg aaggeracta ettttgggar actgaggttt atgtratere gatgttgare
tacactcatc caagaatcgc tgagaatgcg ctgagattcc gggtgaatac ccttccgcaa
480
getegaegee gggetaagga attgtetgaa egaggegeee tttteeegtg gegaacaate
540
accggt
546
<210> 2316
<211> 182
<212> PRT
<213> Homo sapiens
<400> 2316
Xaa Ala Ser Leu Ile Asp Thr Glu Pro Gly Met Gly Lys Arg Val Tyr
                                    10
Arg Val Glu Ala Thr Gln Gly Arg Pro Ile Arg Ile Asp Lys Ala Val
Ala Tyr His Thr Ser Arg Gly Val Pro Val His Glu Leu Phe Asp Arg
Val Arg Arg Ser Leu Asp Arg Val Arg Glu Gln Gly His Asn Val Tyr
Tyr Asp Glu Gln Arg Ala Trp Leu Asp Asp Tyr Trp Ala Thr Ala Asp
                                        75
Val Glu Val Glu Gly Ala Pro Thr Gly Ile Gln Gln Ala Val Arg Trp
                                    90
Asn Leu Phe Gln Ile Ala Gln Ala Ser Ala Arg Ala Asp Gln Leu Gly
                                105
Ile Pro Ala Lys Gly Val Thr Gly Ser Gly Tyr Glu Gly His Tyr Phe
                            120
Trp Asp Thr Glu Val Tyr Val Ile Pro Met Leu Thr Tyr Thr His Pro
                        135
                                            140
Arg Ile Ala Glu Asn Ala Leu Arg Phe Arg Val Asn Thr Leu Pro Gln
                    150
Ala Arg Arg Arg Ala Lys Glu Leu Ser Glu Arg Gly Ala Leu Phe Pro
                                    170
Trp Arg Thr Ile Thr Gly
           180
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<210> 2317
<211> 496
<212> DNA
<213> Homo sapiens
<400> 2317
geeggeggge tegggaacgg teactgacet geageaggea atggeggteg eggtttaate
agggttctgc acggagtttt ggatagtccg tccagtcgcc actggcaagg cgcgaccagg
cagetgetga egetgetgtg atgeegagga gateggagae gattegtggg tgeatetgee
180
gggtcagttc gatcagcgcg gtcgttcgag cgcttcctga acgcagcccc tgctggcgca
gacgtcggct gagtgggcct ggtgtgagat gcaaccccgg attcctgcca ggaaagagcc
atccctcggg tcggtgtctc gatgtgtcag cgagctcggc gatcgcattc ccgaggacct
egggeagtte gattggeteg geteegatgg tgagetteee eggtegtgat gteaegtega
cctgctcacg ggtgagcgcg acgatgcgag tgaggtggag gccgtagagg agcacgagca
acccagcggc acgcgt
496
<210> 2318
<211> 108
<212> PRT
<213> Homo sapiens
<400> 2318
Met Pro Arg Arg Ser Glu Thr Ile Arg Gly Cys Ile Cys Arg Val Ser
Ser Ile Ser Ala Val Val Arg Ala Leu Pro Glu Arg Ser Pro Cys Trp
Arg Arg Arg Leu Ser Gly Pro Gly Val Arg Cys Asn Pro Gly Phe
                            40
Leu Pro Gly Lys Ser His Pro Ser Gly Arg Cys Leu Asp Val Ser Ala
                        55
Ser Ser Ala Ile Ala Phe Pro Arg Thr Ser Gly Ser Ser Ile Gly Ser
                                        75
Ala Pro Met Val Ser Phe Pro Gly Arg Asp Val Thr Ser Thr Cys Ser
                85
Arg Val Ser Ala Thr Met Arg Val Arg Trp Arg Pro
                                105
<210> 2319
<211> 1748
<212> DNA
<213> Homo sapiens
<400> 2319
ntgatcaagt ctcggtctct ggattatacc tttgttcctc gaacttggat ctttcctgct
60
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gaatatactc aattccaaaa ttatgtgaaa gaattgaaga aaaaacggaa gcagaaaact 120 tttatagtga aaccagctaa tggtgcaatg ggtcatggga tttctttgat aagaaatggt gacaaacttc catctcagga tcatttgatt gttcaagaat acattgaaaa gcctttccta 240 atggaaggtt acaagtttga cttacgaatt tatattctgg ttacatcgtg tgatccacta aaaatatttc tctaccatga tgggcttgtg cgaatgggta cagagaagta cattccacct aatgagtcca atttgaccca gttatacatg catctgacaa actactccgt gaacaagcat aatgagcatt ttgaacggga tgaaactgag aacaaaggca gcaaacgttc catcaaatgg tttacagaat tccttcaagc aaatcaacat gatgttgcta agttttggag tgatatttca gaattggtgg taaagaccct gattgtagca gaacctcatg teetgeatge ctategaatg tgtagacctg gtcaacctcc aggaagcgaa agtgtctgct ttgaagtcct gggatttgat attttgttgg atagaaaact aaagccatgg cttctggaga ttaaccgagc cccaagcttt ggaactgatc agaaaataga ctatgatgta aaaaggggag tgctgctaaa tgcgttgaag 780 ctactaaaca taaggaccag tgacaaaaga agaaacttgg ccaaacaaaa agctgaggct caaaggaggc tctatggtca aaattcaatt aaaaggctct taccaggctc ctcagactgg gaacagcaga gacaccagtt ggagaggcgg aaagaagagt tgaaagagag actcgctcaa gtacgaaagc agatctcacg agaagaacat gaaaatcgac atatggggaa ttatagacga 1020 atttatcctc ctgaagataa agcattactt gaaaagtatg aaaatttgtt agctgttgcc tttcagacct tcctttcagg aagagcagct tcattccagc gagagttgaa taatcctttg aaaaggatga aggaagaaga tattttggat cttctggagc aatgtgaaat tgatgatgaa aagttgatgg gaaaaactac caagactcga ggaccaaagc ctctgtgttc tatgcctgag agtactgaga taatgaaaag accaaagtac tgcagcagtg acagcagtta tgatagtagc agcagctett cagaatetga egaaaatgaa aaagaagagt accaaaataa gaaaagagaa tecataagae gtteagteag etgeeetegg tecatetetg eteaateace ttecagtggg gacaccegee cattitetge teaacaaatg atatetgtgt caeggeeaac ttetgeatet cggtcacatt ccttaaaccc gggccttcct cctacatgag gcatctgcct cacagtaatg atgectgete taccaactet caagtgagtg agtetttgeg geaactgaaa acaaaagaac 1680

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aagaagatga totaacaagt cagacottat ttgttotcaa agacatgaag atcoggttto
caggaaag
1748
<210> 2320
<211> 532
<212> PRT
<213> Homo sapiens
<400> 2320
Xaa Ile Lys Ser Arg Ser Leu Asp Tyr Thr Phe Val Pro Arg Thr Trp
                5
Ile Phe Pro Ala Glu Tyr Thr Gln Phe Gln Asn Tyr Val Lys Glu Leu
                                25
Lys Lys Lys Arg Lys Gln Lys Thr Phe Ile Val Lys Pro Ala Asn Gly
                            40
Ala Met Gly His Gly Ile Ser Leu Ile Arg Asn Gly Asp Lys Leu Pro
                        55
Ser Gln Asp His Leu Ile Val Gln Glu Tyr Ile Glu Lys Pro Phe Leu
                                        75
                    70
Met Glu Gly Tyr Lys Phe Asp Leu Arg Ile Tyr Ile Leu Val Thr Ser
                                    90
                85
Cys Asp Pro Leu Lys Ile Phe Leu Tyr His Asp Gly Leu Val Arg Met
                                105
Gly Thr Glu Lys Tyr Ile Pro Pro Asn Glu Ser Asn Leu Thr Gln Leu
                                                125
                            120
        115
Tyr Met His Leu Thr Asn Tyr Ser Val Asn Lys His Asn Glu His Phe
                        135
Glu Arg Asp Glu Thr Glu Asn Lys Gly Ser Lys Arg Ser Ile Lys Trp
                                        155
                    150
Phe Thr Glu Phe Leu Gln Ala Asn Gln His Asp Val Ala Lys Phe Trp
                                    170
                165
Ser Asp Ile Ser Glu Leu Val Val Lys Thr Leu Ile Val Ala Glu Pro
                                185
His Val Leu His Ala Tyr Arg Met Cys Arg Pro Gly Gln Pro Pro Gly
                                                205
                            200
Ser Glu Ser Val Cys Phe Glu Val Leu Gly Phe Asp Ile Leu Leu Asp
                                             220
                        215
Arg Lys Leu Lys Pro Trp Leu Leu Glu Ile Asn Arg Ala Pro Ser Phe
                    230
                                        235
Gly Thr Asp Gln Lys Ile Asp Tyr Asp Val Lys Arg Gly Val Leu Leu
                                     250
                245
Asn Ala Leu Lys Leu Leu Asn Ile Arg Thr Ser Asp Lys Arg Arg Asn
                                 265
            260
Leu Ala Lys Gln Lys Ala Glu Ala Gln Arg Arg Leu Tyr Gly Gln Asn
                             280
Ser Ile Lys Arg Leu Leu Pro Gly Ser Ser Asp Trp Glu Gln Gln Arg
                                             300
                        295
 His Gln Leu Glu Arg Arg Lys Glu Glu Leu Lys Glu Arg Leu Ala Gln
                                         315
                    310
Val Arg Lys Gln Ile Ser Arg Glu Glu His Glu Asn Arg His Met Gly
                                     330
 Asn Tyr Arg Arg Ile Tyr Pro Pro Glu Asp Lys Ala Leu Leu Glu Lys
```

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340
                                  345
 Tyr Glu Asn Leu Leu Ala Val Ala Phe Gln Thr Phe Leu Ser Gly Arg
                              360
 Ala Ala Ser Phe Gln Arg Glu Leu Asn Asn Pro Leu Lys Arg Met Lys
                         375
 Glu Glu Asp Ile Leu Asp Leu Leu Glu Gln Cys Glu Ile Asp Asp Glu
                     390
                                          395
 Lys Leu Met Gly Lys Thr Thr Lys Thr Arg Gly Pro Lys Pro Leu Cys
                 405
                                      410
 Ser Met Pro Glu Ser Thr Glu Ile Met Lys Arg Pro Lys Tyr Cys Ser
             420
                                 425
 Ser Asp Ser Ser Tyr Asp Ser Ser Ser Ser Ser Glu Ser Asp Glu
                             440
                                                  445
 Asn Glu Lys Glu Glu Tyr Gln Asn Lys Lys Arg Glu Lys Gln Val Thr
                         455
                                             460 -
 Tyr Asn Leu Lys Pro Ser Asn His Tyr Lys Leu Ile Gln Gln Pro Ser
                     470
                                         475
 Ser Ile Arg Arg Ser Val Ser Cys Pro Arg Ser Ile Ser Ala Gln Ser
                 485
                                     490
 Pro Ser Ser Gly Asp Thr Arg Pro Phe Ser Ala Gln Gln Met Ile Ser
             500
                                 505
 Val Ser Arg Pro Thr Ser Ala Ser Arg Ser His Ser Leu Asn Pro Gly
        515
                             520
Leu Pro Pro Thr
    530
<210> 2321
<211> 433
<212> DNA
<213> Homo sapiens
<400> 2321
caattgtgtg gacgtgtcta tgtgtgtttc taattctata ctatcttgaa aatggttcag
cgttctagaa atacagccac ataatttttt ttgttttgaa aaactgctca gcaaatgcat
acaggtcata atggcaggta acagaccatt tattgaagtg ctgaaacaaa tagaaaacaa
agtocaggac accatcacag agcagtactt coottgtgag atactotcag ctaagtaaga
attgagtgag acaacaataa aacaaatacc cataggcttt tcaaacagta acaacccgct
300
cagggttagc agcatttcta gaccttgatg gtaaaatgat gttctcaacc tttgctttca
gacactggat cactgettaa gtageettta tetttteece etaatttttg ttgaagatge
420
cagaggtgga gtg
433
<210> 2322
<211> 105
<212> PRT
<213> Homo sapiens
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<400> 2322
Met Leu Leu Thr Leu Ser Gly Leu Leu Phe Glu Lys Pro Met Gly
                                   10
Ile Cys Phe Ile Val Val Ser Leu Asn Ser Tyr Leu Ala Glu Ser Ile
            20
Ser Gln Gly Lys Tyr Cys Ser Val Met Val Ser Trp Thr Leu Phe Ser
                            40
Ile Cys Phe Ser Thr Ser Ile Asn Gly Leu Leu Pro Ala Ile Met Thr
                                            60
                        55
Cys Met His Leu Leu Ser Ser Phe Ser Lys Gln Lys Lys Leu Cys Gly
                                        75
                    70
65
Cys Ile Ser Arg Thr Leu Asn His Phe Gln Asp Ser Ile Glu Leu Glu
               · 85
Thr His Ile Asp Thr Ser Thr Gln Leu
<210> 2323
<211> 532
<212> DNA
<213> Homo sapiens
<400> 2323
acgcgtcaaa actggcaaag ctggcggctt agggggaggg gcaagtggac ttggaggccc
tectecactg tgcaccecet tggaaaaaaa geggaggggg catcaagtaa aagtttettg
ccaggcagag ccagctcggc ggccccccgc acatagctgg ggttagcagg ggttgcttct
ctgccgggca cagcgntctc caggagccag ccggggagag ctgagccaag gccgaaggag
cegectgegg gettageege ecetteege eegttggeee cagageggae getgggaege
ccggggtctg gcagctctgc gcccggctag gagcgggcgg gcgagcatta gcctgcgtcc
tggagaaggg gcgcagcgcc gcagttgagg ccgaagcagc ccctcgcggg cgtaggatac
ctgtcagtga gcgcccggat tgcacggccc ccgggtagtg cctgccggcg aggggcggga
getegggtga ettggecate eccateceeg geccaggeec ggagggegge eg
<210> 2324
<211> 51
<212> PRT
<213> Homo sapiens
<400> 2324
Thr Arg Gln Asn Trp Gln Ser Trp Arg Leu Arg Gly Arg Gly Lys Trp
Thr Trp Arg Pro Ser Ser Thr Val His Pro Leu Gly Lys Lys Ala Glu
                                25
Gly Ala Ser Ser Lys Ser Phe Leu Pro Gly Arg Ala Ser Ser Ala Ala
                            40
Pro Arg Thr
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50
 <210> 2325
 <211> 459
 <212> DNA
 <213> Homo sapiens
 <400> 2325
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 gatgagaacc gttttgtggc cgttaccagt tccaacgcag ctaagcttct gaacctgtat
 120
 ccccgcaagg gccgcattat tcccggagcc gatgctgatg tggtggtgtg ggacccagaa
 180
gccacaaaga ccatctcagc cagcacgcag gtccagggag gagacttcaa cctgtatgag
 240
aacatgcgct gccacggcgt gccactggtc accatcagcc gggggcgcgt cgtgtatgag
aacggcgtct tcatgtgcgc cgagggcacc ggcaagttct gtcccctgag gtccttccca
gacactgtct acaagaagct ggtccagaga gagaagactt taaaggttag aggagtggcc
cgcactccct acctggggga tgtcgctgtt gtcgtqcac
459
<210> 2326
<211> 153
<212> PRT
<213> Homo sapiens
<400> 2326
Xaa Arg Val Gln Asp Arg Met Ser Ala Ile Trp Glu Arg Gly Val Val
 1
Gly Gly Lys Met Asp Glu Asn Arg Phe Val Ala Val Thr Ser Ser Asn
                                25
Ala Ala Lys Leu Leu Asn Leu Tyr Pro Arg Lys Gly Arg Ile Ile Pro
                            40
Gly Ala Asp Ala Asp Val Val Val Trp Asp Pro Glu Ala Thr Lys Thr
Ile Ser Ala Ser Thr Gln Val Gln Gly Gly Asp Phe Asn Leu Tyr Glu
                    70
                                        75
Asn Met Arg Cys His Gly Val Pro Leu Val Thr Ile Ser Arg Gly Arg
                85
Val Val Tyr Glu Asn Gly Val Phe Met Cys Ala Glu Gly Thr Gly Lys
                                105
Phe Cys Pro Leu Arg Ser Phe Pro Asp Thr Val Tyr Lys Lys Leu Val
Gln Arg Glu Lys Thr Leu Lys Val Arg Gly Val Ala Arg Thr Pro Tyr
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<210> 2327 <211> 599

135

Leu Gly Asp Val Ala Val Val His

150

<212> DNA <213> Homo sapiens <400> 2327 gaattecaga agatcaagta tteetacgat geeetggaga agaagcagtt teteecegtg geettteetg tgggaaacge etteteatae tateagagea acagaggett ecaggaagae tcagagatcc gagcagctga gaagaaattt gggagcaaca aggccgagat ggtggtgcct gacttetegg agetttteaa ggagagagee acageceeet tetttgtatt teaggtgtte tgtgtggggc tctggtgcct ggatgagtac tggtactaca gcgtctttac gctatccatg 300 ctggtggcgt tcgaggcctc gctggtgcag cagcagatgc ggaacatgtc ggagatccgg aagatgggca acaagcccca catgatccag gtctaccgaa gccgcaagtg gaggcccatt gecagtgatg agategtace aggggacate gtetecateg gtgaggeegg gtteegetea gtcccagtgg gagccccagc ctcagggcct ctggccaacc ctcctgcctc tgccctgcag geogetecce acaggagaae etggtgecat gtgaegtget tetgetgega ggeogetge 599 <210> 2328 <211> 199 <212> PRT <213> Homo sapiens <400> 2328 Glu Phe Gln Lys Ile Lys Tyr Ser Tyr Asp Ala Leu Glu Lys Lys Gln 1 Phe Leu Pro Val Ala Phe Pro Val Gly Asn Ala Phe Ser Tyr Tyr Gln Ser Asn Arg Gly Phe Gln Glu Asp Ser Glu Ile Arg Ala Ala Glu Lys 40 Lys Phe Gly Ser Asn Lys Ala Glu Met Val Val Pro Asp Phe Ser Glu 60 55 Leu Phe Lys Glu Arg Ala Thr Ala Pro Phe Phe Val Phe Gln Val Phe 75 70 Cys Val Gly Leu Trp Cys Leu Asp Glu Tyr Trp Tyr Tyr Ser Val Phe 90 Thr Leu Ser Met Leu Val Ala Phe Glu Ala Ser Leu Val Gln Gln 105 Met Arg Asn Met Ser Glu Ile Arg Lys Met Gly Asn Lys Pro His Met 125 115 120 Ile Gln Val Tyr Arg Ser Arg Lys Trp Arg Pro Ile Ala Ser Asp Glu 140 135 Ile Val Pro Gly Asp Ile Val Ser Ile Gly Glu Ala Gly Phe Arg Ser 160 155 145 150 Val Pro Val Gly Ala Pro Ala Ser Gly Pro Leu Ala Asn Pro Pro Ala 170

Ser Ala Leu Gln Ala Ala Pro His Arg Arg Thr Trp Cys His Val Thr

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180
                                  185
                                                      190
 Cys Phe Cys Cys Glu Ala Ala
         195
 <210> 2329
 <211> 392
 <212> DNA
 <213> Homo sapiens
 <400> 2329
 acgcgttcca tgaatgctgg tgcggctgcc gcgattgcta tgtacgcctg gacgacgcag
 tggtgtccaa agccacgcac tagctgatcg gggagaaccg tcaccctcta ggctcgtgtc
 atgagcacge aacccactga ggaaccactc cgactagttg tggcattcaa tccagtgcct
 agtgcctccc gggttgctca tcatcatgcg acgagatttc gcctggcggt gcaggccttc
 attgtcgtcg tcattggtgg tttgttgtgg gcgttgacgg ccgacgcctt ccagttatcg
 300
 acggtgatgt ggatgctcgg ggcatgggtg gtgctattcc tcgtgctttt cgtcatccag
 aatctgcggc tgcacgccgc tcgcaaggat cc
 392
 <210> 2330
 <211> 90
 <212> PRT
 <213> Homo sapiens
 <400> 2330
Met Ser Thr Gln Pro Thr Glu Glu Pro Leu Arg Leu Val Val Ala Phe
Asn Pro Val Pro Ser Ala Ser Arg Val Ala His His Ala Thr Arg
                                 25
Phe Arg Leu Ala Val Gln Ala Phe Ile Val Val Ile Gly Gly Leu
                            40
Leu Trp Ala Leu Thr Ala Asp Ala Phe Gln Leu Ser Thr Val Met Trp
Met Leu Gly Ala Trp Val Val Leu Phe Leu Val Leu Phe Val Ile Gln
                    70
Asn Leu Arg Leu His Ala Ala Arg Lys Asp
                85
                                    90
<210> 2331
<211> 2813
<212> DNA
<213> Homo sapiens
<400> 2331
nnggagcaag agagttatta aaagtgggtg gaagacttcc tggtgcagga ggctcactcc
gatttaaggt gcccgagtcc acgctgatgg actgccgtag acaactgaaa gacagtaagc
120
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180				tggacctctt	
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420 gttccaggac	ccagctggga	ggagtcattt	tggaggctca	cggtcttctt	tgtcagtttg
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600 gatgtaatca	gccccattc	ttacaaaagc	aattgcaaga	actttctcga	tacatatggc
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720 cagaatgctg	caaagaggag	cccagccacc	tatggtcatt	ctcagaagaa	gcacaaatgc
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1620					tttacctgct
1680					a caagttctgc
1740			·		

tecgatteca getetgactg tgggagetec tetggeageg tgcgtgecag eeggggeage

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tgggggaget ggageageae cageagetee gaeggggata agaageeeat ggtggaegee
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 cagcacttcc tgccggccgg agacagtgtt tcacaaaatg attttccttc tgaagctccc
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gactcgagtt actgtgggaa tgtgtgaaaa taattggatt tttaaacaat gtgaataaag
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<212> PRT
<213> Homo sapiens
<400> 2332
Pro Asp Phe Thr Ser Ser Trp Val Ile Arg Asp Leu Ser Leu Val Thr
Ala Ala Asp Leu Glu Phe Arg Phe Thr Leu Asn Val Thr Leu Pro His
His Leu Leu Pro Leu Cys Ala Asp Val Val Pro Gly Pro Ser Trp Glu
Glu Ser Phe Trp Arg Leu Thr Val Phe Phe Val Ser Leu Ser Leu Leu
                       55
Gly Val Ile Leu Ile Ala Phe Gln Gln Ala Gln Tyr Ile Leu Met Glu
Phe Met Lys Thr Arg Gln Arg Gln Asn Ala Ser Ser Ser Ser Gln Gln
```

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85
Asn Asn Gly Pro Met Asp Val Ile Ser Pro His Ser Tyr Lys Ser Asn
                                                  110
                              105
Cys Lys Asn Phe Leu Asp Thr Tyr Gly Pro Ser Asp Lys Gly Arg Gly
                                              125
                          120
Lys Asn Cys Leu Pro Val Asn Thr Pro Gln Ser Arg Ile Gln Asn Ala
                                          140
                      135
Ala Lys Arg Ser Pro Ala Thr Tyr Gly His Ser Gln Lys Lys His Lys
                                      155
                  150
Cys Ser Val Tyr Tyr Ser Lys His Lys Thr Ser Thr Ala Ala Ala Ser
                                                      175
                                  170
                165
Ser Thr Ser Thr Thr Glu Glu Lys Gln Thr Ser Pro Leu Gly Ser
                               185
Ser Leu Pro Ala Ala Lys Glu Asp Ile Cys Thr Asp Ala Met Arg Glu
                           200
Asn Trp Ile Ser Leu Arg Tyr Ala Ser Gly Ile Asn Val Asn Leu Gln
                       215
Lys Asn Leu Thr Leu Pro Lys Asn Leu Leu Asn Lys Glu Glu Asn Thr
                                       235
                   230
Leu Lys Asn Thr Ile Val Phe Ser Asn Pro Ser Ser Glu Cys Ser Met
                                   250
                245
Lys Glu Gly Ile Gln Thr Cys Met Phe Pro Lys Glu Thr Asp Ile Lys
                               265
            260
Thr Ser Glu Asn Thr Ala Glu Phe Lys Glu Arg Glu Leu Cys Pro Leu
                           280
        275
Lys Thr Ser Lys Leu Pro Glu Asn His Leu Pro Arg Asn Ser Pro
                                           300
                       295
Gln Tyr His Gln Pro Asp Leu Pro Glu Ile Ser Arg Lys Asn Asn Gly
                                       315
                    310
Asn Asn Gln Gln Val Pro Val Lys Asn Glu Val Asp His Cys Glu Asn
                                    330
                325
Leu Lys Lys Val Asp Thr Lys Pro Ser Ser Glu Lys Lys Ile His Lys
                                345
            340
Thr Ser Arg Glu Asp Met Phe Ser Glu Lys Gln Asp Ile Pro Phe Val
                            360
Glu Gln Glu Asp Pro Tyr Arg Lys Lys Leu Gln Glu Lys Arg Glu
                                            380
                       375
Gly Asn Leu Gln Asn Leu Asn Trp Ser Lys Ser Arg Thr Cys Arg Lys
                                       395
                   390
Asn Lys Lys Arg Gly Val Ala Pro Val Ser Arg Pro Pro Glu Gln Ser
                                   410
                405
Asp Leu Lys Leu Val Cys Ser Asp Phe Glu Arg Ser Glu Leu Ser Ser
                                                   430
            420
                               425
Asp Ile Asn Val Arg Ser Trp Cys Ile Gln Glu Ser Thr Arg Glu Val
                            440
Cys Lys Ala Asp Ala Glu Ile Ala Ser Ser Leu Pro Ala Ala Gln Arg
                        455
                                           460
Glu Ala Gly Tyr Tyr Gln Lys Pro Glu Lys Lys Cys Val Asp Lys Phe
                                        475
                    470
Cys Ser Asp Ser Ser Ser Asp Cys Gly Ser Ser Ser Gly Ser Val Arg
                                    490
                485
Ala Ser Arg Gly Ser Trp Gly Ser Trp Ser Ser Thr Ser Ser Ser Asp
                                505
Gly Asp Lys Lys Pro Met Val Asp Ala Gln His Phe Leu Pro Ala Gly
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515
                             520
                                                  525
Asp Ser Val Ser Gln Asn Asp Phe Pro Ser Glu Ala Pro Ile Ser Leu
                        535
                                             540
Asn Leu Ser His Asn Ile Cys Asn Pro Met Thr Val Asn Ser Leu Pro
                    550
                                         555
Gln Tyr Ala Glu Pro Ser Cys Pro Ser Leu Pro Ala Gly Pro Thr Gly
                                     570
Val Glu Glu Asp Lys Gly Leu Tyr Ser Pro Gly Asp Leu Trp Pro Thr
            580
                                585
Pro Pro Val Cys Val Thr Ser Ser Leu Asn Cys Thr Leu Glu Asn Gly
                             600
Val Pro Cys Val Ile Gln Glu Ser Ala Pro Val His Asn Ser Phe Ile
Asp Trp Ser Ala Thr Cys Glu Gly Gln Phe Ser Ser Ala Tyr Cys Pro
625
                    630
                                         635
Leu Glu Leu Asn Asp Tyr Asn Ala Phe Pro Glu Glu Asn Met Asn Tyr
                645
                                    650
Ala Asn Gly Phe Pro Cys Pro Ala Asp Val Gln Thr Asp Phe Ile Asp
                                665
His Asn Ser Gln Ser Thr Trp Asn Thr Pro Pro Asn Met Pro Ala Ala
                            680
Trp Gly His Ala Ser Phe Ile Ser Ser Pro Pro Tyr Leu Thr Ser Thr
                        695
                                             700
Arg Ser Leu Ser Pro Met Ser Gly Leu Phe Gly Ser Ile Trp Ala Pro
                    710
                                        715
Gln Ser Asp Val Tyr Glu Asn Cys Cys Pro Ile Asn Pro Thr Thr Glu
                725
                                    730
His Ser Thr His Met Glu Asn Gln Ala Val Val Cys Lys Glu Tyr Tyr
                                745
Pro Gly Phe Asn Pro Phe Arg Ala Tyr Met Asn Leu Asp Ile Trp Thr
                            760
Thr Thr Ala Asn Arg Asn Ala Asn Phe Pro Leu Ser Arg Asp Ser Ser
Tyr Cys Gly Asn Val
785
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<212> DNA
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gaagtaataa atatgaatgg ggtgtatcat ataatgaaca acgaatatcc atatagtgca
gacgaagttc ttcacaaagc aaaatcatat ttgtcagcag atgaatatga gtatgtttta
aaaagctatc atattgetta tgaagcacat aaaggtcagt teegaaaaaa eggattaeca
tacattatge atcetataca agttgeaggt attttaacag aaatgegatt agaeggaeeg
acgattgtcg caggtttttt gcatgatgta attgaagata caccgtatac atttgaagat
```

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gtaaaagaaa tgttcaatga agaagttgct cgaattgttg atggtgtgac gaagcttaaa
420
aaaataaaat accgctcaaa agaagaacaa caagctgaaa atcatcgcaa gttatttatt
gcgattgcca aagatgtacg c
501
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<212> PRT
<213> Homo sapiens
<400> 2334
Met Asn Gly Val Tyr His Ile Met Asn Asn Glu Tyr Pro Tyr Ser Ala
Asp Glu Val Leu His Lys Ala Lys Ser Tyr Leu Ser Ala Asp Glu Tyr
                               25
Glu Tyr Val Leu Lys Ser Tyr His Ile Ala Tyr Glu Ala His Lys Gly
Gln Phe Arg Lys Asn Gly Leu Pro Tyr Ile Met His Pro Ile Gln Val
                         55
Ala Gly Ile Leu Thr Glu Met Arg Leu Asp Gly Pro Thr Ile Val Ala
                    70
Gly Phe Leu His Asp Val Ile Glu Asp Thr Pro Tyr Thr Phe Glu Asp
                                     90
                85
Val Lys Glu Met Phe Asn Glu Glu Val Ala Arg Ile Val Asp Gly Val
                                105
Thr Lys Leu Lys Lys Ile Lys Tyr Arg Ser Lys Glu Glu Gln Gln Ala
                             120
Glu Asn His Arg Lys Leu Phe Ile Ala Ile Ala Lys Asp Val Arg
                         135
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<210> 2335
<211> 387
<212> DNA
<213> Homo sapiens
<400> 2335
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tetetgeaga tggaccacae agcattecee tgtggetget geagggaggg etgtgagaae
cccatgggcc gtgtggaatt taatcaggca agagttcaga cccatttcat ccacacactc
accegectge agttggaaca ggaggetgag agetttaggg agetggagge ecetgeecag
ggcagcccac ccagccctgg tgaggaggcc ctggtcccta ctttcccact ggccaagccc
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gcatcttcat cagcatcggg cactagt
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 <210> 2336
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<211> 106
 <212> PRT
 <213> Homo sapiens
<400> 2336
Met Asp His Thr Ala Phe Pro Cys Gly Cys Cys Arg Glu Gly Cys Glu
                                     10
Asn Pro Met Gly Arg Val Glu Phe Asn Gln Ala Arg Val Gln Thr His
Phe Ile His Thr Leu Thr Arg Leu Gln Leu Glu Gln Glu Ala Glu Ser
Phe Arg Glu Leu Glu Ala Pro Ala Gln Gly Ser Pro Pro Ser Pro Gly
                         55
Glu Glu Ala Leu Val Pro Thr Phe Pro Leu Ala Lys Pro Pro Met Asn
                    70
                                         75
Asn Glu Leu Gly Asp Asn Ser Cys Ser Ser Asp Met Thr Asp Ser Ser
Thr Ala Ser Ser Ser Ala Ser Gly Thr Ser
            100
<210> 2337
<211> 359
<212> DNA
<213> Homo sapiens
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accatgtgca gctcaagaat ggcctccggc ccatcggcct cggggcaggg gaagggcagc
ttctctgcac cagcttccct gctgggctcc agggcccaca ggctgaggcc gggggcccag
gggtcaatgc caggcaccct gctattgagg aacctatcca ggaggaagga ctcgggcaga
cctgcgggat cctcgtcctc ccacgggtcc tcatggcaga agcagaagga gctggaqtcq
ctgaggtccg tgggcaggcg ggctgggccc aacgtggggt caccgacctc ctcaaagct
<210> 2338
<211> 98
<212> PRT
<213> Homo sapiens
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Met Cys Ser Ser Arg Met Ala Ser Gly Pro Ser Ala Ser Gly Gln Gly
                                    10
Lys Gly Ser Phe Ser Ala Pro Ala Ser Leu Leu Gly Ser Arg Ala His
Arg Leu Arg Pro Gly Ala Gln Gly Ser Met Pro Gly Thr Leu Leu Leu
                            40
Arg Asn Leu Ser Arg Arg Lys Asp Ser Gly Arg Pro Ala Gly Ser Ser
Ser Ser His Gly Ser Ser Trp Gln Lys Gln Lỳs Glu Leu Glu Ser Leu
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70
65
Arg Ser Val Gly Arg Arg Ala Gly Pro Asn Val Gly Ser Pro Thr Ser
                                    90
                85
Ser Lys
<210> 2339
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<212> DNA
<213> Homo sapiens
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ccctgtcctc caccttcgtc gtcgcagtcg tcagtgtcct gtggtttgtg ccctccgggc
120
actggtcccg gtagggcttg taatgctggg gcgctcggcg cgatgtgcca gttccttggt
gagttactcc totacactgg tgtgaacaag accggagaat tccccccat attotcgttt
cccgctcgtc ccgcacgtca ttgggactgg cttttacgcg gtagtggttg ccgtactctg
gttgctctgc ggcacggtcg gcagggggat catgtcatga gtccgacggt gagcgagcgg
cgtcttagcg cgccaatgcg acgtggcatc gtggcactgt gcgtggcgat ggccttcgtg
ttgtcggggt gcggtgctg
439
<210> 2340
<211> 92
 <212> PRT
 <213> Homo sapiens
 <400> 2340
Met Cys Gln Phe Leu Gly Glu Leu Leu Leu Tyr Thr Gly Val Asn Lys
                                     10
                  5
Thr Gly Glu Phe Pro Pro Ile Phe Ser Phe Pro Ala Arg Pro Ala Arg
His Trp Asp Trp Leu Leu Arg Gly Ser Gly Cys Arg Thr Leu Val Ala
                             40 .
Leu Arg His Gly Arg Gln Gly Asp His Val Met Ser Pro Thr Val Ser
                                             60
                         55
Glu Arg Arg Leu Ser Ala Pro Met Arg Arg Gly Ile Val Ala Leu Cys
                     70
 Val Ala Met Ala Phe Val Leu Ser Gly Cys Gly Ala
                                     90
                 85
 <210> 2341
 <211> 411
 <212> DNA
 <213> Homo sapiens
 <400> 2341
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gccaaacctc ccctccatcc tgcccaagat ggatcttgct gagcctccct ggcatatgcc
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 tctgcaggag gagccagagg aggtcacgga ggaggaggag gaaagggaag aagaggagag
 ggagaaggaa gcagaggagg aggaggaaga ggaagagctg ctcctgtgag cgggtcccca
 ggagccaccg cacaggccca tgccccttca cctagcacca gcagcagcac cagcagccag
 agtoctgggg ccaccoggca caggcaggag gattotggag accaggccac atcaggcnat
 ggaagtggag agcagtgtga aacccacctt gtcagtgccc tcagtcaccc caagtacagt
 ggccccgggg gttcagaact atagccagga gtctgggggc actgagtggc n
 <210> 2342
 <211> 113
 <212> PRT
<213> Homo sapiens
<400> 2342
Ala Ser Leu Ala Tyr Ala Ser Ala Gly Gly Ala Arg Gly Gly His Gly
Gly Gly Gly Lys Gly Arg Arg Gly Glu Gly Glu Gly Ser Arg Gly
                                 25
Gly Gly Gly Arg Gly Arg Ala Ala Pro Val Ser Gly Ser Pro Gly Ala
Thr Ala Gln Ala His Ala Pro Ser Pro Ser Thr Ser Ser Ser Thr Ser
                        55
Ser Gln Ser Pro Gly Ala Thr Arg His Arg Gln Glu Asp Ser Gly Asp
65
Gln Ala Thr Ser Gly Xaa Gly Ser Gly Glu Gln Cys Glu Thr His Leu
                                     90
Val Ser Ala Leu Ser His Pro Lys Tyr Ser Gly Pro Gly Gly Ser Glu
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                                 105
                                                     110
Leu
<210> 2343
<211> 522
<212> DNA
<213> Homo sapiens
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ggaggccagg gaccctacca agccatgtcc caggacatgg gcaataccca agacatgttc
agecetgate agageteaat geceatgage aacgtgggea ceaceegget cagecacatg
cctctgcccc ctgcgtccaa tcctcctggg accgtgcatt cagccccaaa ccgggggcta
ggcaggcggc cttcggacct caccatcagt attaatcaga tgggctcacc gggcatgggg
300
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cacttgaagt egeceaecet tagecaggtg cactcaecee tggtcaecte gecetetgee
aacctcaagt caccccagac tecetcacag atggtgeeet tgeettetge caaccegeca
ggacctetca agtegeecca ggteetegge teeteeetea gtgteegtte acceaetgge
tegeccagea ggetcaagte teettecatg geggtgeett et
<210> 2344
<211> 174
<212> PRT
<213> Homo sapiens
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Gly Pro Gln Lys Met Leu Met Pro Ser Gln Phe Pro Asn Gln Gly Gln
Gln Gly Phe Ser Gly Gly Gln Gly Pro Tyr Gln Ala Met Ser Gln Asp
                                25
Met Gly Asn Thr Gln Asp Met Phe Ser Pro Asp Gln Ser Ser Met Pro
Met Ser Asn Val Gly Thr Thr Arg Leu Ser His Met Pro Leu Pro Pro
                        55
Ala Ser Asn Pro Pro Gly Thr Val His Ser Ala Pro Asn Arg Gly Leu
                                         75
                    70
Gly Arg Arg Pro Ser Asp Leu Thr Ile Ser Ile Asn Gln Met Gly Ser
                                     90
                85
Pro Gly Met Gly His Leu Lys Ser Pro Thr Leu Ser Gln Val His Ser
                                                     110
                                 105
            100
Pro Leu Val Thr Ser Pro Ser Ala Asn Leu Lys Ser Pro Gln Thr Pro
                                                 125
                             120
Ser Gln Met Val Pro Leu Pro Ser Ala Asn Pro Pro Gly Pro Leu Lys
                                             140
                         135
Ser Pro Gln Val Leu Gly Ser Ser Leu Ser Val Arg Ser Pro Thr Gly
                                         155
                     150
Ser Pro Ser Arg Leu Lys Ser Pro Ser Met Ala Val Pro Ser
                 165
 <210> 2345
 <211> 561
 <212> DNA
 <213> Homo sapiens
 <400> 2345
nagatotocg tottgatott gagcaccgag gcactggggg gggaggacag cagccgcggg
 ggeetecace agecegegte caggeegeet gggetegaeg egetggaeag gegeeggegg
 etggegetge egecettttg cegttteege ettttettge gettetggtg ettgetggag
 geetgegege eegeetegee tgegetgtee gagteettgg egetgtegga egtgagtgae
 tegeagttet geageegeag gteegacteg etetecacea tagetattaa tgeeaagaat
 300
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gcaaatgaaa agaatatcat ctgggtgaat taccttctta gcaatcctga gtacaaggac
 360
 acacccatgg acatcgcaca getececcat etgeeggaga aaaetteega ateeteggag
 acateegaet etgagteaga etetaaagae aceteaggta ttacagagga caaegagaae
 tccaagnntc cgacgagaag gggaaccagt ccgagaacag cgaagacccg gagcccgacc
 ggaagaagtc gggcaacgcg t
 561
 <210> 2346
.<211> 187
 <212> PRT
 <213> Homo sapiens
<400> 2346
Xaa Ile Ser Val Leu Ile Leu Ser Thr Glu Ala Leu Gly Gly Glu Asp
                                     10
Ser Ser Arg Gly Gly Leu His Gln Pro Ala Ser Arg Pro Pro Gly Leu
             20
Asp Ala Leu Asp Arg Arg Arg Leu Ala Leu Pro Pro Phe Cys Arg
                             40
Phe Arg Leu Phe Leu Arg Phe Trp Cys Leu Leu Glu Ala Cys Ala Pro
                        55
Ala Ser Pro Ala Leu Ser Glu Ser Leu Ala Leu Ser Asp Val Ser Asp
                                         75
Ser Gln Phe Cys Ser Arg Arg Ser Asp Ser Leu Ser Thr Ile Ala Ile
                85
                                     90
Asn Ala Lys Asn Ala Asn Glu Lys Asn Ile Ile Trp Val Asn Tyr Leu
            100
                                105
Leu Ser Asn Pro Glu Tyr Lys Asp Thr Pro Met Asp Ile Ala Gln Leu
                            120
Pro His Leu Pro Glu Lys Thr Ser Glu Ser Ser Glu Thr Ser Asp Ser
                        135
Glu Ser Asp Ser Lys Asp Thr Ser Gly Ile Thr Glu Asp Asn Glu Asn
                    150
                                        155
Ser Lys Xaa Pro Thr Arg Arg Gly Thr Ser Pro Arg Thr Ala Lys Thr
                165
                                    170
Arg Ser Pro Thr Gly Arg Ser Arg Ala Thr Arg
            180
                                185
<210> 2347
<211> 375
<212> DNA
<213> Homo sapiens
<400> 2347
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gagaacgtcg agtacgcctg cgccgcgccg gaagtactga agggtgaata cagccgtaac
gtcggtccga acatcgacgc ctggtccgat ttccagccgc tgggcgtggt ggcggggatc
180
```

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acgccattca acttcccggc gatggtgccc ctgtggatgt atccgttggc gatcgtttgc
240
ggtaactgct ttatcctcaa gccgtccgag cgtgatccga gctcgacctt gctgatcgcc
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accgcggtgg acgcg
375
<210> 2348
<211> 125
<212> PRT
<213> Homo sapiens
<400> 2348
Ile Ser Glu Glu His Gly Arg Thr Leu Glu Asp Ala Ala Gly Glu Leu
                                                         15
Lys Arg Gly Ile Glu Asn Val Glu Tyr Ala Cys Ala Ala Pro Glu Val
                                25
Leu Lys Gly Glu Tyr Ser Arg Asn Val Gly Pro Asn Ile Asp Ala Trp
                                               . 45
                            40
Ser Asp Phe Gln Pro Leu Gly Val Val Ala Gly Ile Thr Pro Phe Asn
                        55
Phe Pro Ala Met Val Pro Leu Trp Met Tyr Pro Leu Ala Ile Val Cys
                                         75
Gly Asn Cys Phe Ile Leu Lys Pro Ser Glu Arg Asp Pro Ser Ser Thr
                85
Leu Leu Ile Ala Gln Leu Leu Gln Glu Ala Gly Leu Pro Lys Gly Val
                                105
Leu Asn Val Val His Gly Asp Lys Thr Ala Val Asp Ala
                            120
        115
<210> 2349
<211> 417
<212> DNA
<213> Homo sapiens
 <400> 2349
nnnaaaaaaa aaaaaaaaa aaaaacacaa tatttaatgg acgcggttta ttcagcaggt
gctgacaaag tttttggtgt cccaggagat tttaatctag cctttttaga tgatattatt
gcacataatc atattaaatg gattggtaat acaaatgaac ttaatgcaag ttatgccgct
 gacggatatg cacgtattaa tggcatcggt gcaatggtaa caacatttgg agtgggtgaa
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 actggggcac ctactcgagc tgtagaacaa gaaggcaaat acgttcacca ttcccttggc
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 417
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<210> 2350

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<211> 139
 <212> PRT
 <213> Homo sapiens
 <400> 2350
 Xaa Lys Lys Lys Lys Lys Lys Thr Gln Tyr Leu Met Asp Ala Val
 Tyr Ser Ala Gly Ala Asp Lys Val Phe Gly Val Pro Gly Asp Phe Asn
                                 25
 Leu Ala Phe Leu Asp Asp Ile Ile Ala His Asn His Ile Lys Trp Ile
 Gly Asn Thr Asn Glu Leu Asn Ala Ser Tyr Ala Ala Asp Gly Tyr Ala
                         55
                                             60
 Arg Ile Asn Gly Ile Gly Ala Met Val Thr Thr Phe Gly Val Gly Glu
                     70
                                         75
Leu Ser Ala Val Asn Gly Ile Ala Gly Ser Tyr Ala Glu Arg Val Pro
                                     90
Val Ile Ala Ile Thr Gly Ala Pro Thr Arg Ala Val Glu Gln Glu Gly
            100
Lys Tyr Val His His Ser Leu Gly Glu Gly Thr Phe Asp Asp Tyr Arg
Lys Met Phe Glu Pro Ile Thr Thr Ala Gln Ala
<210> 2351
<211> 696
<212> DNA
<213> Homo sapiens
<400> 2351
nacgegttge egegegataa etetggtgag ggtettgetg gggeeetget ggeeettgtt
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Asn Asp Ala Gly Met Ile Arg Ile Asp Asp Asn Leu Gly Ile Ala Leu
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Ala Thr Pro Val Ala Val Thr Asp Cys Leu Asn Tyr Gly Ser Pro Tyr
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Asp Pro Asp Val Met Trp Gln Phe Asp Glu Thr Ile Leu Gly Leu Val
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Asp Gly Cys Arg Glu Leu Gly Val Pro Val Thr Gly Gly Asn Val Ser
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Gly Val Leu Gly Val Ile Asp Asp Val His Arg Arg Ile Pro Ser Ala
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Phe Ala His Asp Gly Asp Ala Val Leu Leu Leu Gly Thr Thr Lys Cys
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Glu Phe Gly Gly Ser Val Tyr Glu Asp Val Ile His Ala Gly His Leu
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Val Pro Glu Thr Ile Ala Leu Leu Thr Leu Ala Asn Ile Lys Ile Trp
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Cys Lys Met Leu Thr Asp Asp Met Thr Glu Val Phe Ile Val Thr Gly
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His Thr Val Leu Glu Val Arg Glu Glu Xaa Gln Glu Ser Pro Gly Glu
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Asp Asp Gly Leu Ile Xaa Arg Ser Val Gly Asn Gly Phe Thr Tyr Gln
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Asp Lys Leu Ser Ser Ser Lys Leu Thr Ser Val Leu Glu Ala Val Ala
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Glu Ala Asp Met Glu Leu Glu Phe Leu Glu Thr Ala Cys Ala Cys Lys
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Ala Val Ile Cys Cys Arg Val Thr Pro Leu Gln Lys Ala Gln Val Val
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Glu Leu Val Lys Lys Tyr Lys Lys Ala Val Thr Leu Ala Ile Gly Asp
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Gly Ala Asn Asp Val Ser Met Ile Lys Thr Ala His Ile Gly Val Gly
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Ile Ser Gly Gln Glu Gly Ile Gln Ala Val Leu Ala Ser Asp Tyr Ser
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Phe Ser Gln Phe Lys Phe Leu Gln Arg Leu Leu Val His Gly Arg
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Trp Ser Tyr Leu Arg Met Cys Lys Phe Leu Cys Tyr Phe Phe Tyr Lys
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 Ile Val Tyr Thr Ser Leu Pro Val Leu Ala Met Gly Val Phe Asp Gln
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 Asp Val Pro Glu Gln Arg Ser Met Glu Tyr Pro Lys Leu Tyr Glu Pro
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 Gly Gln Leu Asn Leu Leu Phe Asn Lys Arg Glu Phe Phe Ile Cys Ile
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 His Ser Asn Gly Leu Phe Asp Met Phe Pro Asn Gln Phe Arg Phe Val
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Gln Leu Val Arg Lys Lys Gln Lys Ala Gln His Arg Cys Met Arg Arg
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Val Gly Arg Thr Gly Ser Arg Arg Ser Gly Tyr Ala Phe Ser His Gln
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Glu Gly Phe Gly Glu Leu Ile Met Ser Gly Lys Asn Met Arg Leu Ser
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Ser Leu Ala Leu Ser Ser Phe Thr Thr Arg Ser Ser Ser Ser Trp Ile
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Val Tyr Tyr Asp Ala Asp Gly Lys Thr His Asn Asp Val Ala Lys Ser
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Ile Asp Phe Asp Gly Asp Arg Thr Tyr Thr Val Thr Leu Arg Lys Thr
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Pro Gly Ala Trp Thr His Thr Ser Ala Ala Ile His Asp Ala Leu Ile
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Lys Ala Gln Gln His Thr Val Ser Gln Val Cys Gln Val Pro Gln His
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Ser Leu Pro Pro Ser Ser Glu Val Ser Phe Pro Thr Phe Ser Glu Leu
Ser Val Ser Met Ala Ser Ser Ala Thr Ser Ala Thr Ser Pro Asp Val
Leu Ala Ser Val Ser Ile Ala Ser Ser Trp Arg Ser Ser Ala Arg Cys
                    70
Ser Lys Pro Thr Ala Xaa Arg Ser Lys Arg Asp Cys Val Thr Thr Gln
                85
                                     90
Lys Val Ala Gln Gly Leu Ala Ala Val Pro Ser Gly Ser Leu Cys Ala
            100
                                 105
Gln Pro Pro Ser Ala Gly Phe Pro Gly Pro Cys Cys Gly Ala Arg Ser
                                                 125
Pro Asp Glu Arg Ser Arg Ser
    130
                         135
<210> 2365
<211> 429
<212> DNA
<213> Homo sapiens
<400> 2365
acceggigece ageteceacg getegiceag acctaegitg agaaactieg acgagacagi
ctccgtcagt tcgcccaaca acctctgaac gaagtcaaga ttctccggca ctggagccaa
ggtgcttgcc ctggcatgaa cgccccaggg gaggtcgacg ccgtcgggat tctcacaccg
180
```

```
atggtgatgg gactcggttt ccaaccacgg ttccatgtga cccagacagt tctggttggc
 ecegageteg atgectegte egegacacag accategage caceteatgt ecteegeegt
 cacggggctg cggtcggccc acacctcctc ctcaccgcgg taggcaaatc ccgcttcacc
 atagagetea aggtgattga gaccacaceg egecatgaeg egegteagga aateaagagt
 ggaacgcgt
 429
 <210> 2366
 <211> 132
 <212> PRT
 <213> Homo sapiens
 <400> 2366
 Met Ala Arg Cys Gly Leu Asn His Leu Glu Leu Tyr Gly Glu Ala Gly
 Phe Ala Tyr Arg Gly Glu Glu Glu Val Trp Ala Asp Arg Ser Pro Val
             20
 Thr Ala Glu Asp Met Arg Trp Leu Asp Gly Leu Cys Arg Gly Arg Gly
Ile Glu Leu Gly Ala Asn Gln Asn Cys Leu Gly His Met Glu Pro Trp
                         55
Leu Glu Thr Glu Ser His His His Arg Cys Glu Asn Pro Asp Gly Val
65
                    70
                                         75
Asp Leu Pro Trp Gly Val His Ala Arg Ala Ser Thr Leu Ala Pro Val
Pro Glu Asn Leu Asp Phe Val Gln Arg Leu Leu Gly Glu Leu Thr Glu
            100
                                 105
Thr Val Ser Ser Lys Phe Leu Asn Val Gly Leu Asp Glu Pro Trp Glu
                            120
Leu Gly Thr Gly
    130
<210> 2367
<211> 474
<212> DNA
<213> Homo sapiens
<400> 2367
ngtgcacggg agaagacgtg cgcgcagttc ggcggaacct atccgggttc ggccggcagt
gggggtcacg agetcaccga cgcgcgcgcg ttcgcctcgt ggggcgtcga tttcgtcaaa
120
tacgateggt geteeggtga eteegegeac gacgaccagg tegeetegtt cacegegatg
cgtgacgcaa tccgatccac cggacgcccc atggtgtaca gcatcaaccc caacagcgaa
tegeeggate ggteeggage ceaattegat tggggeggtg tggeaaceat gacacgtace
accaacgaca totogooggt gtggaccact cggccggccg gtgccgatgc gacaccggca
```

```
teggggtate aggggatecg egacateate gacgeegtgg eccegategg egeacgggtt
420
gcgacggcag cttcgtcgac atggacatgc tcgtcgtcgg tgtcggcaac gcgt
474
<210> 2368
<211> 158
<212> PRT
<213> Homo sapiens
<400> 2368
Xaa Ala Arg Glu Lys Thr Cys Ala Gln Phe Gly Gly Thr Tyr Pro Gly
Ser Ala Gly Ser Gly Gly His Glu Leu Thr Asp Ala Arg Ala Phe Ala
                                25
           20
Ser Trp Gly Val Asp Phe Val Lys Tyr Asp Arg Cys Ser Gly Asp Ser
Ala His Asp Asp Gln Val Ala Ser Phe Thr Ala Met Arg Asp Ala Ile
                        55
Arg Ser Thr Gly Arg Pro Met Val Tyr Ser Ile Asn Pro Asn Ser Glu
                    70
Ser Pro Asp Arg Ser Gly Ala Gln Phe Asp Trp Gly Gly Val Ala Thr
                                     90
Met Thr Arg Thr Thr Asn Asp Ile Ser Pro Val Trp Thr Thr Arg Pro
                                105
            100
Ala Gly Ala Asp Ala Thr Pro Ala Ser Gly Tyr Gln Gly Ile Arg Asp
                                                 125
                            120
Ile Ile Asp Ala Val Ala Pro Ile Gly Ala Arg Val Ala Thr Ala Ala
                                             140
                        135
Ser Ser Thr Trp Thr Cys Ser Ser Ser Val Ser Ala Thr Arg
                                         155
                    150
<210> 2369
<211> 408
<212> DNA
<213> Homo sapiens
<400> 2369
ctgaatggca ggcaggcaga ggccaccaga gccagcccc cgagaagccc tgctgagcca
aaggggagcg ccctgggacc taacccagag ccccatctca ccttcccccg ttctttcaaa
gtgcctcccc caaccccagt caggacttcg tccatcccag ttcaggaagc acaagaggct
cccgaaagga agagggggcc accaagaagg ctcccagccg actcccactg cctcccagct
tecacatecg eccegeetee caggtetace cagacaggge eccegagene agactgeeet
ggggagetea aggecacage accagecage ecaaggettg gecagteeca gteecaagea
gatgaacgag ctgggactcc gcctccagcc cctcccctgc cccctcct
408
```

<210> 2370

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<211> 136
 <212> PRT
 <213> Homo sapiens
 <400> 2370
 Leu Asn Gly Arg Gln Ala Glu Ala Thr Arg Ala Ser Pro Pro Arg Ser
 Pro Ala Glu Pro Lys Gly Ser Ala Leu Gly Pro Asn Pro Glu Pro His
 Leu Thr Phe Pro Arg Ser Phe Lys Val Pro Pro Pro Thr Pro Val Arg
                             40
Thr Ser Ser Ile Pro Val Gln Glu Ala Gln Glu Ala Pro Glu Arg Lys
                         55
Arg Gly Pro Pro Arg Arg Leu Pro Ala Asp Ser His Cys Leu Pro Ala
                                         75
Ser Thr Ser Ala Pro Pro Pro Arg Ser Thr Gln Thr Gly Pro Pro Ser
                                     90
Xaa Asp Cys Pro Gly Glu Leu Lys Ala Thr Ala Pro Ala Ser Pro Arg
            100
                                105
Leu Gly Gln Ser Gln Ser Gln Ala Asp Glu Arg Ala Gly Thr Pro Pro
                            120
Pro Ala Pro Pro Leu Pro Pro
    130
                        135
<210> 2371
<211> 327
<212> DNA
<213> Homo sapiens
<400> 2371
gaattcggtg tgcgatgcga gcctgcagcc tgggagcaga gacaaggagc aaaggcggtg
agagggttgc cagggcaccc agttacagct ggagctgcag gggacccatc cctcgagaga
ggcaggcact agtcatgagg caagagatgc ctcagaagag gatgctggcc gcagggcaca
180
gcagagaggg agatagcccg gggcactcct caggaccggg cctcagggga cagcaaacaa
gattcctgat agacgcgccc aggtcatgcc ttttcagtgg tgtgagccag gttctggcgt
caggcgggcc aaggttttca tgcagcn
327
<210> 2372
<211> 104
<212> PRT
<213> Homo sapiens
<400> 2372
Met Arg Ala Cys Ser Leu Gly Ala Glu Thr Arg Ser Lys Gly Glu
                                    10
Arg Val Ala Arg Ala Pro Ser Tyr Ser Trp Ser Cys Arg Gly Pro Ile
Pro Arg Glu Arg Gln Ala Leu Val Met Arg Gln Glu Met Pro Gln Lys
```

45

40

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Arg Met Leu Ala Ala Gly His Ser Arg Glu Gly Asp Ser Pro Gly His
Ser Ser Gly Pro Gly Leu Arg Gly Gln Gln Thr Arg Phe Leu Ile Asp
                    70
Ala Pro Arg Ser Cys Leu Phé Ser Gly Val Ser Gln Val Leu Ala Ser
                                    90
Gly Gly Pro Arg Phe Ser Cys Ser
           100
<210> 2373
<211> 591
<212> DNA
<213> Homo sapiens
<400> 2373
gaattetgae atteaggaag teaattgeag aaggtttaae eaagttgatt etgttttaee
60
aaatcetgte tattetgaaa ageggeeaat geeagaetea teteatgatg tgaaagttet
cacttcaaag acatcagctg ttgagatgac ccaggcagta ttgaatactc agctttcatc
agaaaatgtt accaaagttg agcaaaattc accagcagtt tgtgaaacaa tttctgttcc
caagtccatg tccactgagg aatataaatc aaaaattcaa aatgaaaata tgctacttct
cgctttgctt tcacaggcac gtaagactca gaagacagta ttaaaagatg ctaatcaaac
tattcaggat tctaaaccag acagttgtga aatgaatcca aatacccaaa tgactggtaa
ccaactgaat ttgaagaaca tggaaactcc aagtacttct aatgtaagtg gcagggtttt
ggacaactcc ttttgcagtg gacaagaatc ctcaacaaaa ggaatgcctg ctaaaagtga
cagtagetgt tecatggaag tgetageaac etgtetttee etgtggaaaa a
<210> 2374
<211> 167
<212> PRT
<213> Homo sapiens
<400> 2374
Met Pro Asp Ser Ser His Asp Val Lys Val Leu Thr Ser Lys Thr Ser
Ala Val Glu Met Thr Gln Ala Val Leu Asn Thr Gln Leu Ser Ser Glu
            20
Asn Val Thr Lys Val Glu Gln Asn Ser Pro Ala Val Cys Glu Thr Ile
                            40
Ser Val Pro Lys Ser Met Ser Thr Glu Glu Tyr Lys Ser Lys Ile Gln
Asn Glu Asn Met Leu Leu Leu Ala Leu Leu Ser Gln Ala Arg Lys Thr
Gln Lys Thr Val Leu Lys Asp Ala Asn Gln Thr Ile Gln Asp Ser Lys
```

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85
                                     90
                                                          95
 Pro Asp Ser Cys Glu Met Asn Pro Asn Thr Gln Met Thr Gly Asn Gln
            100
                                 105
 Leu Asn Leu Lys Asn Met Glu Thr Pro Ser Thr Ser Asn Val Ser Gly
        115
                             120
 Arg Val Leu Asp Asn Ser Phe Cys Ser Gly Gln Glu Ser Ser Thr Lys
                        135
                                             140
Gly Met Pro Ala Lys Ser Asp Ser Ser Cys Ser Met Glu Val Leu Ala
                    150
                                         155
                                                              160
Thr Cys Leu Ser Leu Trp Lys
                165
<210> 2375
<211> 535
<212> DNA
<213> Homo sapiens
<400> 2375
ntggccatgt cgttgctcag cagcggcacc ctggacagtt accttgagcg tcacaaacaa
ctggacgcga tgcgcatgct gcacttcttc gccctcgacg aagaaaaccc cqccaqcatc
120
tataactgcc tgcgcgccgc gcggggcaat gcccacgcgg tacgcgggcg gatcaccgcc
180
gacatgtggg aaaacctcaa cgccacctgg ctggaaatgc gcagcatcgc cgccggqqqc
240
ctggcccggc atggcatcag ccacttctgt gactgggtca agcagcgttc gcacctgttc
cgcggggcaa cctcgggcac catcatgcgc aacgacgctt accggtttat tcgcctgggc
360
acgtttgtcg agcgcgcga caacaccctg cgcctgctgg atgcgcgcta cgaaatgttt
ggtgaggagt cggaagaggt cagcgacctg tcggcacgcg ggtattacca gtggagcgcc
ctgctgcggg ccttgtcgtc attcgaggcg tataccgaac tgtaccccaa cqcqt
535
<210> 2376
<211> 178
<212> PRT
<213> Homo sapiens
<400> 2376
Xaa Ala Met Ser Leu Leu Ser Ser Gly Thr Leu Asp Ser Tyr Leu Glu
                                    10
Arg His Lys Gln Leu Asp Ala Met Arg Met Leu His Phe Phe Ala Leu
Asp Glu Glu Asn Pro Ala Ser Ile Tyr Asn Cys Leu Arg Ala Ala Arg
Gly Asn Ala His Ala Val Arg Gly Arg Ile Thr Ala Asp Met Trp Glu
                        55
                                            60
Asn Leu Asn Ala Thr Trp Leu Glu Met Arg Ser Ile Ala Ala Gly Gly
Leu Ala Arg His Gly Ile Ser His Phe Cys Asp Trp Val Lys Gln Arg
```

```
85
Ser His Leu Phe Arg Gly Ala Thr Ser Gly Thr Ile Met Arg Asn Asp
                                105
           100
Ala Tyr Arg Phe Ile Arg Leu Gly Thr Phe Val Glu Arg Ala Asp Asn
                            120
       115
Thr Leu Arg Leu Leu Asp Ala Arg Tyr Glu Met Phe Gly Glu Glu Ser
                        135
Glu Glu Val Ser Asp Leu Ser Ala Arg Gly Tyr Tyr Gln Trp Ser Ala
                                        155
                    150
Leu Leu Arg Ala Leu Ser Ser Phe Glu Ala Tyr Thr Glu Leu Tyr Pro
                                    170
                165
Asn Ala
<210> 2377
<211> 622
<212> DNA
<213> Homo sapiens
<400> 2377
acgcgtgaag ggttgaggct tcagaagtgg tagggaagaa cagaagctcc cttctgaggg
ageacccagg agatgaaagg aaccaatcct gggtggtcct gcaccaggct tatcaacccc
tgacagacaa atggaaaact tctgtgatgg tgggacatga aaaaatattt cacccttctg
ataaaatgga accagcagat agaagtagga atttttctgt taggtgaaat gtttttaaaa
atatgtatac aggaaaaagc ataaaacagt attgactggc aaacatagaa ctggaatgta
aatataatgt totttgccct gaatgattta agtggcatga taaaactcat gccacagact
gggtaagaca aggaatctaa tccactctaa aaagaagaaa agcatagtaa aattctcctt
agagttagaa ttattaatag ttcctatcta ctatttaatt taatcatagt taatgatgag
aatttettaa atttaaaget tetgatgatg etaaatgtge attteteatg atteettaaa
acaatttttg taaattctat tootaggaco ttotgottto agaaaaatta atgtottgta
ttcttcgtat tggaggagat ct
622
<210> 237B
<211> 109
<212> PRT
<213> Homo sapiens
<400> 2378
Met Ser Phe Ile Met Pro Leu Lys Ser Phe Arg Ala Lys Asn Ile Ile
Phe Thr Phe Gln Phe Tyr Val Cys Gln Ser Ile Leu Phe Tyr Ala Phe
Ser Cys Ile His Ile Phe Lys Asn Ile Ser Pro Asn Arg Lys Ile Pro
```

<211> 434

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35
                             40
Thr Ser Ile Cys Trp Phe His Phe Ile Arg Arg Val Lys Tyr Phe Phe
                         55
Met Ser His His His Arg Ser Phe Pro Phe Val Cys Gln Gly Leu Ile
                    70
                                         75
Ser Leu Val Gln Asp His Pro Gly Leu Val Pro Phe Ile Ser Trp Val
                                     90
Leu Pro Gln Lys Gly Ala Ser Val Leu Pro Tyr His Phe
            100
                                 105
<210> 2379
<211> 342
<212> DNA
<213> Homo sapiens
<400> 2379
tcatgacctg gagacttegg aaactcaaca agactgcagg gcacccaggg gcaccagccc
cggtcaccgc agaggatcag tgcactttgc catctggcag atcaactcat ggcacaactg
ggaaacataa cattcacget tgtgaaccga gacgccatac cccagcggtg ccgagagcaa
cagtgctgtg caggtctggg cagatgaggg cctccaggac acgaggactc actcgctcac
cetgeceact gggcagetge tegecactee ceteetggag ggcaggacgg acaecacaca
cacacacaag cagggaagct gtgcagcagt ggggagaaag ca
<210> 2380
<211> 113
<212> PRT
<213> Homo sapiens
<400> 2380
Met Thr Trp Arg Leu Arg Lys Leu Asn Lys Thr Ala Gly His Pro Gly
Ala Pro Ala Pro Val Thr Ala Glu Asp Gln Cys Thr Leu Pro Ser Gly
            20
                                25
Arg Ser Thr His Gly Thr Thr Gly Lys His Asn Ile His Ala Cys Glu
                            40
Pro Arg Arg His Thr Pro Ala Val Pro Arg Ala Thr Val Leu Cys Arg
                        55
Ser Gly Gln Met Arg Ala Ser Arg Thr Arg Gly Leu Thr Arg Ser Pro
                    70
                                        75
Cys Pro Leu Gly Ser Cys Ser Pro Leu Pro Ser Trp Arg Ala Gly Arg
                85
                                    90
Thr Pro His Thr His Thr Ser Arg Glu Ala Val Gln Gln Trp Gly Glu
            100
                                105
Ser
<210> 2381
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<212> DNA
<213> Homo sapiens
<400> 2381
gtgcaccctg gccatatgga cgccagcgac gtcggcgtct tgcgtgacgt ggaaccgatc
ggcccaagta gagagatgga ttttgaatgg tgacgatgta cccgccgcag caagtggatg
120
ccgtcctctt tgacatggac ggaaccctgc tcaacaccct gccggcctgg tgcgtggcat
ctgagcatct gtggggcact tctctggctg acgctgacag cgccaaggtt gacgggggca
cegtegacga egtegttgag etgtatetge gagaceacce teaggeagat ecceaggeea
ccatcgagcg tttcatggac atccttgacg ccaacctggc tggccacacc gagccgatgc
ceggagetga cegeetegtg aagaggetgt caggteatgt acceateget gtggtgtega
420
atteccegae gegt
434
<210> 2382
<211> 116
<212> PRT
<213> Homo sapiens
<400> 2382
Met Val Thr Met Tyr Pro Pro Gln Gln Val Asp Ala Val Leu Phe Asp
                                    10
                 5
Met Asp Gly Thr Leu Leu Asn Thr Leu Pro Ala Trp Cys Val Ala Ser
                                25
            20
Glu His Leu Trp Gly Thr Ser Leu Ala Asp Ala Asp Ser Ala Lys Val
                            40
Asp Gly Gly Thr Val Asp Asp Val Val Glu Leu Tyr Leu Arg Asp His
                                             60
                        55
    50
Pro Gln Ala Asp Pro Gln Ala Thr Ile Glu Arg Phe Met Asp Ile Leu
                    70
                                         75
Asp Ala Asn Leu Ala Gly His Thr Glu Pro Met Pro Gly Ala Asp Arg
                                    90
Leu Val Lys Arg Leu Ser Gly His Val Pro Ile Ala Val Val Ser Asn
            100
                                 105
Ser Pro Thr Arg
        115
<210> 2383
 <211> 393
 <212> DNA
 <213> Homo sapiens
 <400> 2383
 acgcgtgcgt tcagatgagc gccggacgaa actcctcggt cgcttcggca ggcatggatt
 catgtcggca cgggcctttg aacaggatcg ccgtcgcgtg gctatccgcc gcgggtgggg
 120
```

<210> 2386

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cagaaaacgc ccactetece tteeceagge geeggeegte gagtegteta egeaacgcae
 gtctacatag gtgacttttt cataccccca ctttcgtact cggatgggct cggcgtgctc
 gatgtcggca cgaaaaatta aatgcactga atgcgggttg tcgcacagga tgcatctcgt
 ctttcttgat gccacccacc ttgttacata ttctgccatg caaaacacct tgtgatttt
 ggcggagtgc aacatggtat gtgtatgcca ctg
 393
 <210> 2384
 <211> 125
 <212> PRT
 <213> Homo sapiens
 <400> 2384
Met Leu His Ser Ala Lys Asn His Lys Val Phe Cys Met Ala Glu Tyr
Val Thr Arg Trp Val Ala Ser Arg Lys Thr Arg Cys Ile Leu Cys Asp
            20
Asn Pro His Ser Val His Leu Ile Phe Arg Ala Asp Ile Glu His Ala
Glu Pro Ile Arg Val Arg Lys Trp Gly Tyr Glu Lys Val Thr Tyr Val
                        55
Asp Val Arg Cvs Val Asp Asp Ser Thr Ala Gly Ala Trp Gly Arg Glu
65
                    70
Ser Gly Arg Phe Leu Pro His Pro Arg Arg Ile Ala Thr Arg Arg Arg
                                     90
Ser Cys Ser Lys Ala Arg Ala Asp Met Asn Pro Cys Leu Pro Lys Arg
                                 105
Pro Arg Ser Phe Val Arg Arg Ser Ser Glu Arg Thr Arg
        115
                             120
                                                 125
<210> 2385
<211> 347
<212> DNA
<213> Homo sapiens
<400> 2385
acgcgttccc aaagtaggat ggctgggata gagggaaagg acatctttca ggcttgttat
gcactgtgct gtggactctt gttgtggggt cctaggtctg cccagcattt tggggttcac
ecegigacce tetacgggit tecatgeece cageaceaeg tecateatea titetggggi
ceceteacet cagagageet getteetatg actgegtggg ceagetggag aaggacgace
240
caagacccct caagtttctg tgtcctgacc ccaagcatag gcctgagtgc tcctggggcc
caagggcett tacgcactac tetetgggge ceaetgtetg cactett
347
```

```
<211> 109
<212> PRT
<213> Homo sapiens
<400> 2386
Met Ala Gly Ile Glu Gly Lys Asp Ile Phe Gln Ala Cys Tyr Ala Leu
Cys Cys Gly Leu Leu Trp Gly Pro Arg Ser Ala Gln His Phe Gly
                                25
            20
Val His Pro Val Thr Leu Tyr Gly Phe Pro Cys Pro Gln His His Val
                            40
His His His Phe Trp Gly Pro Leu Thr Ser Glu Ser Leu Leu Pro Met
Thr Ala Trp Ala Ser Trp Arg Arg Thr Thr Gln Asp Pro Ser Ser Phe
                    70
Cys Val Leu Thr Pro Ser Ile Gly Leu Ser Ala Pro Gly Ala Gln Gly
                                    90
Pro Leu Arg Thr Thr Leu Trp Gly Pro Leu Ser Ala Leu
            100
<210> 2387
<211> 715
<212> DNA
<213> Homo sapiens
<400> 2387
neggeegeae tteaeettae ggagggaga taatgagate aattagagge geegteaeeg
cgccggagac agctgccgcc gcatagtaat cacccgcggg ctgggtgcgc gggggctccc
egetacetge gegeetgetg eteceaceae geggeacega ecegggegeg eceeeggeee
ctgtccgcag cccacagcca caccgcgcac cctacaccct ccttgcgcct ctgctgggga
geteacece tecactegea cagtgegetg eggeeegggg tgtgggaggt eeegggaett
gggttgtgag tgcctgtgtg ggggtagggg caggtgtccg cttgtgcgca tatgggcatg
360
agtgtacatg gcgtgtgcct ggagatgggc gagtgcaggc tggaatgtgc cggcgtggca
cgtgtgtggg cccaaataga tgcgtgtgtg atcacatgtt gtgttcgtgt ttgcacctcg
480
tgtgcctgtg tgtccgtatt tgagtgctta caggaatgtg ggtggtgagt acccgtatgt
gggtgcatct yeacttgtgc gtgtgtgtgt gtaggcgcgt gtgtgtgcgt gtgtgtgtta
ngggatacgt gtagatgtgc attagtgtga ctgtgtgtgc tcatgtgcct gtgcacgtgt
gtttgaggtt tgtgtgcatg ggtagcgtct gtgagagcca tgtgtatatc tgcag
715
 <210> 2388
 <211> 58
 <212> PRT
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<211> 388

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<213> Homo sapiens
 <400> 2388
Met Gly Met Ser Val His Gly Val Cys Leu Glu Met Gly Glu Cys Arg
Leu Glu Cys Ala Gly Val Ala Arg Val Trp Ala Gln Ile Asp Ala Cys
Val Ile Thr Cys Cys Val Arg Val Cys Thr Ser Cys Ala Cys Val Ser
Val Phe Glu Cys Leu Gln Glu Cys Gly Trp
                        55
<210> 2389
<211> 336
<212> DNA
<213> Homo sapiens
<400> 2389
ntcaccetge egeeggaagg ttgetegtac egeatggeea tegteaceat gaagaagteg
tatecgggcc acgccaagcg cgtcatgttg ggtgtctggt cgtttttqcq acaqttcatq
120
tataccaagt tegttategt cacegaegae gatateaaeg eeegegaetg gaaegaegtg
atctgggcca tcaccacgcg catggacccc aagcgcgaca cggtgatgat cgataacacq
240
ccgatcgact acctcgactt cgcctcgccg gtgtccggcc tgggttcgaa gatggggctc
gateceaege acaaatggee eggeeaeaee accegn.
336
<210> 2390
<211> 112
<212> PRT
<213> Homo sapiens
<400> 2390
Xaa Thr Leu Pro Pro Glu Gly Cys Ser Tyr Arg Met Ala Ile Val Thr
Met Lys Lys Ser Tyr Pro Gly His Ala Lys Arg Val Met Leu Gly Val
Trp Ser Phe Leu Arg Gln Phe Met Tyr Thr Lys Phe Val Ile Val Thr
Asp Asp Asp Ile Asn Ala Arg Asp Trp Asn Asp Val Ile Trp Ala Ile
Thr Thr Arg Met Asp Pro Lys Arg Asp Thr Val Met Ile Asp Asn Thr
Pro Ile Asp Tyr Leu Asp Phe Ala Ser Pro Val Ser Gly Leu Gly Ser
                                    90
Lys Met Gly Leu Asp Pro Thr His Lys Trp Pro Gly His Thr Thr Arg
                                105
<210> 2391
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<212> DNA
<213> Homo sapiens
<400> 2391
gregactaac crgcgracag ccgccaccct acgttragtc gcgaagcgrg rcggcrccat
60
gttcattccg gagctacacc atgaataaag tactacctga tecacccatc gatcccgcaa
aagaccgcgt cgctttcaac cgcgccatcg accattacct gcctacccag ggcttccact
gegtcaacga agacetgagt ttegaagaeg ecetgeteta caeegeeage etgetegaea
gtgcctctgc cacggcgctg gattgcggtg agctgctgca aagccctgaa cgggcgaaga
teetggeegt gtggeatttg etggaaattg caaaaaceae egtagatege tteeceateg
agtgcctgac cgcaccaaag ccctgcct
388
<210> 2392
<211> 102
<212> PRT
<213> Homo sapiens
<400> 2392
Met Asn Lys Val Leu Pro Asp Pro Pro Ile Asp Pro Ala Lys Asp Arg
Val Ala Phe Asn Arg Ala Ile Asp His Tyr Leu Pro Thr Gln Gly Phe
                                25
His Cys Val Asn Glu Asp Leu Ser Phe Glu Asp Ala Leu Leu Tyr Thr
Ala Ser Leu Leu Asp Ser Ala Ser Ala Thr Ala Leu Asp Cys Gly Glu
Leu Leu Gln Ser Pro Glu Arg Ala Lys Ile Leu Ala Val Trp His Leu
                    70
Leu Glu Ile Ala Lys Thr Thr Val Asp Arg Phe Pro Ile Glu Cys Leu
                                    90
Thr Ala Pro Lys Pro Cys
            100
<210> 2393
<211> 411
<212> DNA
<213> Homo sapiens
<400> 2393
aacctgtcta ccgaggacca ggccgagcag gtagagattg tgaagcgctc tgagtccggc
atggtcaccg accccatcac tgcgcgcccg gatatgacca tcggggaagt agacgcgctg
tgegeceget teegeatete eggeetgeeg gtggtagaeg aggaeggeae eetgatggge
atttgcacca cccgcgatat gcgcttcgag cctgactttg accgcaaggt cagcgaggtc
240
```

<210> 2396

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atgacggeta tgccgcttgt tgttgcgcgc gagggtgtat ctaagaagga agccctcgaa
 ctgctctcgg ccaataaggt ggaaaagctg cccatcgtcg atgcggataa taagctcacc
ggcctgatta ccgtcaagga ctttgtcaag accgagcagt accccaacgc g
411
<210> 2394
<211> 137
<212> PRT
<213> Homo sapiens
<400> 2394
Asn Leu Ser Thr Glu Asp Gln Ala Glu Gln Val Glu Ile Val Lys Arg
                                     10
Ser Glu Ser Gly Met Val Thr Asp Pro Ile Thr Ala Arg Pro Asp Met
Thr Ile Gly Glu Val Asp Ala Leu Cys Ala Arg Phe Arg Ile Ser Gly
Leu Pro Val Val Asp Glu Asp Gly Thr Leu Met Gly Ile Cys Thr Thr
                        55
                                             60
Arg Asp Met Arg Phe Glu Pro Asp Phe Asp Arg Lys Val Ser Glu Val
                    70
Met Thr Ala Met Pro Leu Val Val Ala Arg Glu Gly Val Ser Lys Lys
                85
Glu Ala Leu Glu Leu Leu Ser Ala Asn Lys Val Glu Lys Leu Pro Ile
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                                 105
Val Asp Ala Asp Asn Lys Leu Thr Gly Leu Ile Thr Val Lys Asp Phe
Val Lys Thr Glu Gln Tyr Pro Asn Ala
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<212> DNA
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ttagcaatat taatctgacc ttttcctggt gattgggcat ttagtaataa tgcggggcca
atatcatcat actttccaaa tatttttgat ttt. Tagaca tcaactgaag ttgtgaccat
ttactgtctt tgtcttgatg gcaatctaaa caaacatctc ttgtattaag ttgttcactt
acccaaggat taggcactct aaaggcatga tcgcgtcgat catcgactcc catgtaacgc
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gt
362
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<213> Homo sapiens
<400> 2396
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Trp Val Ser Glu Gln Leu Asn Thr Arg Asp Val Cys Leu Asp Cys His
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           20
Gln Asp Lys Asp Ser Lys Trp Ser Gln Leu Gln Leu Met Ser Lys Lys
                            40
Ser Lys Ile Phe Gly Lys Tyr Asp Asp Ile Gly Pro Ala Leu Leu
Asn Ala Gln Ser Pro Gly Lys Gly Gln Ile Asn Ile Ala Lys Leu Val
                    70
Val Asp Glu Ser Gln Pro Pro Met Arg Arg Ala Val Leu Leu Gly His
                                    90
                85
Leu Asp Met Thr Lys Val Glu Asn Met Gln Ile Leu Asn Thr Leu Ala
                                105
            100
Asn Ser Ser Glu Ser
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<211> 449
<212> DNA
<213> Homo sapiens
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aagggtacat caacaacact ctctccatct tcaaagtcgc agacttcaaa aacaaaagca
agggaaaccc gtactctgac ctgggtaacc ataccacatg caggtatcgt gatttccgat
acceaectgg acaeececag gagtataaac acaaeateta etattggeat gtgattgeag
ccaagetgge ttttateatt gteatggage aegteateta etetgtgaaa ttttteattt
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taacccaaaa gcttcttcat gagaatcac
449
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<212> PRT
<213> Homo sapiens
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Cys Thr Thr Gly Pro Ser Pro Ser Leu Pro Thr Gly Thr Thr Leu Pro
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Thr Pro Trp Lys Gly Thr Ser Thr Thr Leu Ser Pro Ser Ser Lys Ser
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Gln Thr Ser Lys Thr Lys Ala Arg Glu Thr Arg Thr Leu Thr Trp Val
                            40
Thr Ile Pro His Ala Gly Ile Val Ile Ser Asp Thr His Leu Asp Thr
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Pro Arg Ser Ile Asn Thr Thr Ser Thr Ile Gly Met
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<212> DNA
<213> Homo sapiens
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gtttctgacg atcgagcgcc tggccatgtc aggggaactt tcgggtaaag aacaggaact
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acceptatege ttgagatege acacaceetc gegetegatt gete
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<211> 112
<212> PRT
<213> Homo sapiens
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Met Leu His Glu Thr Gly His Ala Leu His Tyr Gln Ala Ala Gly Lys
His Asn Leu Tyr Phe Glu Arg Val Ala Pro Val Glu Ile Met Glu Phe
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                                25
Val Ala Tyr Cys Leu Gln Phe Leu Thr Ile Glu Arg Leu Ala Met Ser
                            40
Gly Glu Leu Ser Gly Lys Glu Gln Glu Leu Val Lys Pro Phe Ala Gly
   50
                        55
                                             60
Pro Ala Arg Leu Gly Gly Val Arg Lys Pro Thr Thr Pro Gln Asn Gly
Ser Ser Thr Gly Phe Ile Asn Ser Leu Lys Ser Arg Gln Val Lys Asn
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Ser Ile Pro Tyr Gly Leu Arg Cys Asp Thr Arg Ser Gly Trp Ile Gly
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            100
                                105
<210> 2401
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<212> DNA
<213> Homo sapiens
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gctacttccc tcgagctcac aggcgacgac ggcggctggt ggtcattttt caccaacctc
gtggacaagt acggcgcagt cccggccgag gtcatgcctg aggtgcactc gtccggccac
accgaccaga tgaatcgcga tatcgccacc atcatccgcc gcgccgcgca ccgtgcggtg
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<211> 159
<212> PRT
<213> Homo sapiens
<400> 2402
Xaa Thr Glu Val Lys Leu Asp Ser Leu Gly Val Thr Asp Gln Met Arg
                                    10
Ser Gly Arg Cys Trp Met Phe Ala Ala Leu Asn Val Phe Arg His Arg
                                25
Ala Ala Lys Glu Leu Asn Ile Asp Asp Phe Glu Phe Ser Phe Thr Tyr
Leu Gln Tyr Phe Asp Lys Leu Glu Arg Ala Asn Phe Ala Leu Asn Gln
                        55
Leu Leu Asp Leu Thr Glu Asp Gly Thr Asp Trp Asp Asp Arg Asp Val
                                         75
                    70
Ala Thr Ser Leu Glu Leu Thr Gly Asp Asp Gly Gly Trp Trp Ser Phe
                                     90
Phe Thr Asn Leu Val Asp Lys Tyr Gly Ala Val Pro Ala Glu Val Met
                                105
            100
Pro Glu Val His Ser Ser Gly His Thr Asp Gln Met Asn Arg Asp Ile
Ala Thr Ile Ile Arg Arg Ala Ala His Arg Ala Val Glu Gly Glu Gly
                        135
Asp Arg Gly Gly Ile Val Lys Gln Ala Arg Pro Asp Ile Gln Arg
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                    150
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<212> DNA
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gtgcagcgta ttgccgccga gaccggccgt gatatccgtt cgctgatcgg tgacgccgcg
120
```

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tteetcaage geetggacee gaagaagtae aeegacgaaa cetteggtgt geegaceate
accgacated tgcaagaget ggaaaaacet ggccgcgace cgcgtcccga gttcaagace
gecgagttee aggaeggtgt tgaagaeett aaggaeetge ageegggeat gateetegaa
ggcgtggtca ccaacgtgac caactttggc gcctttgtgg atatcggcgt gcatcaggac
ggtttggtgc acatctctgc actttcg
387
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<211> 129
<212> PRT
<213> Homo sapiens
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Xaa Met Asn Gly Asp Asn Pro Leu Asp Ser Ser Ala Val His Pro Glu
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Ala Tyr Pro Leu Val Gln Arg Ile Ala Ala Glu Thr Gly Arg Asp Ile
            20
                                25
Arg Ser Leu Ile Gly Asp Ala Ala Phe Leu Lys Arg Leu Asp Pro Lys
Lys Tyr Thr Asp Glu Thr Phe Gly Val Pro Thr Ile Thr Asp Ile Leu
    50
                        55
Gln Glu Leu Glu Lys Pro Gly Arg Asp Pro Arg Pro Glu Phe Lys Thr
                    70
                                        75
Ala Glu Phe Gln Asp Gly Val Glu Asp Leu Lys Asp Leu Gln Pro Gly
                                    90
Met Ile Leu Glu Gly Val Val Thr Asn Val Thr Asn Phe Gly Ala Phe
            100
                                105
Val Asp Ile Gly Val His Gln Asp Gly Leu Val His Ile Ser Ala Leu
        115
                            120
Ser
<210> 2405
<211> 859
<212> DNA
<213> Homo sapiens
<400> 2405
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120
ctcactccac atttcactac aaaccaagga aagctccctc atggaccgac atctggtgag
cetteatete teccetggea atgeetggee acetgaeace tggeeteeet cetettteea
gcaatcctgg taccaacgaa tggctcacca ccacccaccc caatgcccag accgcagacc
tgcattecte ceateteaca gececaaate caaacegtta tteattetae etcecatect
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actectcacg aatttettee accgtagact etggttaatt ggaetgaetg aageccaggg

420

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gtcagtttct gtcctaagag cgctccaggt ggctgcaccc tgtgcccaga gccaggcccc
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agttcactga agggcagacc tgggatcata cagggagcaa ggaagcttga gccccttcag
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<211> 149
<212> PRT
<213> Homo sapiens
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Met Asp Arg His Leu Val Ser Leu His Leu Ser Pro Gly Asn Ala Trp
Pro Pro Asp Thr Trp Pro Pro Ser Ser Phe Gln Gln Ser Trp Tyr Gln
                                25
Arg Met Ala His His His Pro Pro Gln Cys Pro Asp Arg Arg Pro Ala
                            40
Phe Leu Pro Ser His Ser Pro Lys Ser Lys Pro Leu Phe Ile Leu Pro
                        55
Pro Ile Leu Leu Leu Thr Asn Phe Phe His Arg Arg Leu Trp Leu Ile
                                        75
                    70
Gly Leu Thr Glu Ala Gln Gly Ser Val Ser Val Leu Arg Ala Leu Gln
                                    90
Val Ala Ala Pro Cys Ala Gln Ser Gln Ala Pro Cys Tyr Arg Leu Ala
            100
                                105
Ala Leu Pro Leu Gln Val Leu Gly Thr Pro Gln Pro Ser Ser Trp Gly
                            120
His Leu Leu Ala Phe Ala Gly Pro Arg Gly Ser Leu Leu Pro Gly Ser
                        135
    130
Arg Leu Trp Val Arg
145
<210> 2407
<211> 303
<212> DNA
<213> Homo sapiens
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 atcccggtca tctttgcctc gtcgatcctg taccttccgg tgctctacgc aactttccgg
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 tac
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 <212> PRT
<213> Homo sapiens
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Met Ala Ala Val Val Phe Ile Glu Gln Gly Gln Arg Arg Ile Pro Val
                                 25
Gln Tyr Ala Lys Arg Met Val Gly Arg Arg Met Phe Gly Gly Ser Thr
        35
Thr Tyr Ile Pro Leu Lys Val Asn Gln Ser Gly Val Ile Pro Val Ile
Phe Ala Ser Ser Ile Leu Tyr Leu Pro Val Leu Tyr Ala Thr Phe Arg
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Pro Gln Thr Ser Ala Ala Lys Trp Ile Gly His Tyr Phe Thr Arg Gly
                85
                                     90
Asp His Pro Val Tyr
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<211> 322
<212> DNA
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cttccggcca aatgaccctc cctaggctac caagaccctg gcctaagggg agccgaggtc
teggeeegae tgeagaegee egeaceetga etecagatge etecgaggea tecaggtggg
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322
<210> 2410
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<212> PRT
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Met Val Ser Ser Pro His Cys Val Ser Pro Glu Ser Asn Trp Arg Pro
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                 5
Ser Asp Thr Thr Ser Arg Pro Asn Arg Arg Gly Ser Arg Asn Ser Asp
                                25
            20
Cys Gly Asn Cys Leu Gln Phe Ser Ser Gly Gln Met Thr Leu Pro Arg
                            40
Leu Pro Arg Pro Trp Pro Lys Gly Ser Arg Gly Leu Gly Pro Thr Ala
                                             60
                        55
Asp Ala Arg Thr Leu Thr Pro Asp Ala Ser Glu Ala Ser Arg Trp Ala
                                         75
                    70
65
Leu Arg Gly Leu Leu Trp Leu Cys Ser Cys Trp Leu Gly Trp Gly Ser
                                    90
Asp Leu Val Arg Asp Met Ser Val Ser Val
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            100
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ggggggctgc g
371
<210> 2412
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Met Gly Trp Val Leu Glu Thr Arg Asp Gln Ala Gly Pro Ala Pro Gly
Ala His Ser Arg Val Cys Gly Arg Gln Gly Asp Arg Gly Ser Cys Glu
                                 25
Ser Pro Glu Ala Glu Trp Leu Ser Gly Glu Ala Pro Ser Leu Gly Thr
                                                  45
Ser Ala Phe Gly Gln Trp Pro Leu Leu Ser Val Cys Arg Ala Glu Ala
                                             60
Gly Ala Arg Val Val Ser Arg Pro Ala Gly Gly Ser Leu Cys Arg Lys
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```
65
                     70
 Gly Gly Trp Arg Leu Ala Cys Gly Trp Gln Glu Gly Gly Met His Val
                 85
                                     90
 Ala Glu Arg Gln Ala Trp Ala Arg Gly Leu Gly Val Gly Thr Pro Glu
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                                 105
 Glu Thr Val Gln Cys Gly Val Gly Gly Ala Ala
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<212> PRT
<213> Homo sapiens
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Pro Ala Cys Ser Asn Ser Ser Gln Asp Leu Ile His Arg Phe Arg Gly
                                25
Thr Cys Gly Leu Trp Val His Ser Pro Gln Trp Gln Asn Leu Gln Ser
```

```
40
       35
His Ile Cys Trp Ala Glu Pro Ala Trp His Glu Gln Gly Phe Ser Leu
                       . 55
                                            60
Leu Trp Pro Pro Leu Phe Asn Thr Val Leu Leu Ser Lys Asn Trp Leu
                                        75
                    70
Gly Gly Ala Gly Pro Pro Cys Asn Leu Gln Ala Cys His Leu Val Val
Ser Phe Cys Ser Ala Ala Ser Gln Gly Phe Ser Ala Pro Gly Ala Gly
                                105
           100
Trp Trp Gly Pro Ala Leu Leu Arg Leu Ile Arg Lys Asp Ala Leu His
                            120
       115
Gly Lys Ser Ser Pro Gln Pro Pro Val
                        135
   130
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<211> 2164
<212> DNA
<213> Homo sapiens
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120
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1020 -
```

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ctcctgtgat ctctgtgttt tcccttttct ttctggggcc aggaagtcag ggtcaactcc
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1980
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aaaa
2164
<210> 2416
<211> 213
<212> PRT
<213> Homo sapiens
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Ala Phe Asp Arg Trp Pro Thr Asp Lys Glu Leu Val Ala Gln Ala Lys
                               25
Ala Leu Gly Arg Glu Tyr Val His Ala Arg Leu Leu Arg Ala Gly Leu
Ser Trp Ser Ala Pro Glu Arg Ala Ser Pro Ala Pro Gly Gly Arg Leu
```

```
55
    50
Ala Glu Val Cys Ala Val Leu Leu Arg Leu Gly Asp Glu Leu Glu Met
                    70
Ile Arg Pro Ser Val Tyr Arg Asn Val Ala Arg Gln Leu His Ile Ser
                                    90
Leu Gln Ser Glu Pro Val Val Thr Asp Ala Phe Leu Ala Val Ala Gly
                                105
His Ile Phe Ser Ala Gly Ile Thr Trp Gly Lys Val Val Ser Leu Tyr
                            120
      - 115
Ala Val Ala Ala Gly Leu Ala Val Asp Cys Val Arg Gln Ala Gln Pro
                        135
Ala Met Val His Ala Leu Val Asp Cys Leu Gly Glu Phe Val Arg Lys
                                        155
                    150
145
Thr Leu Ala Thr Trp Leu Arg Arg Gly Gly Trp Thr Asp Val Leu
                                    170
Lys Cys Val Val Ser Thr Asp Pro Gly Leu Arg Ser His Trp Leu Val
                                185
Ala Ala Leu Cys Ser Phe Gly Arg Phe Leu Lys Ala Ala Phe Phe Val
                            200
Leu Leu Pro Glu Arg
    210
<210> 2417
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<212> DNA
<213> Homo sapiens
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<210> 2418
<211> 101
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Val Val Pro Pro Arg Ser Leu Phe Asp Arg Ala Thr Pro Gly Leu Leu

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90

85

95

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Lys Ile Leu Glu Gly Leu Leu Arg His Pro Glu Asn Arg Glu Cys Ala
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Asp Cys Lys Ser Lys Gly Pro Arg Trp Ala Ser Val Asn Leu Gly Ile
Phe Ile Cys Met Thr Cys Ser Gly Ile His Arg Ser Leu Gly Val His
                         55
Ile Ser Lys Val Arg Ser Ala Thr Leu Asp Thr Trp Leu Pro Glu Gln
                    70
                                         75
Val Ala Phe Ile Gln Ser Met Gly Asn Glu Lys Ala Asn Ser Tyr Trp
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Glu Ala Glu Leu Pro Pro Asn Tyr Asp Arg Val Gly Ile Glu Asn Leu
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aaccagaaac tegeegacgt caegeegege eegegteega geeaggeege etteageete
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<210> 2426
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<212> PRT
<213> Homo sapiens
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Asp Cys Asn Met Pro Val Leu Asn Gly Tyr Glu Met Thr Arg Arg Leu
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Arg Glu His Glu Ala Xaa Ala Met Thr Ser Arg Pro Ala Arg Gly Phe
                            40
Gly Phe Thr Ala His Ala Gln Pro Glu Glu Arg Pro Arg Cys Lys Glu
                                            60
Ala Gly Met Asn Asp Cys Leu Phe Lys Pro Ile Ser Leu Thr Thr Leu
                    70
Asn Gln Lys Leu Ala Asp Val Thr Pro Arg Pro Arg Pro Ser Gln Ala
                                    90
Ala Phe Ser Leu Asp Gly Leu His Ala Leu Thr Gly Gly Glu Pro Leu
                                105
Leu Met Arg Arg Leu Ile Asp Glu Leu Leu Ser Ser Cys Gln Ala Ala
                                                125
                            120
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Arg Glu Ala Leu Leu Gly Leu Pro Ile
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<210> 2427
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<212> DNA
<213> Homo sapiens
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ggagcccaac aagaaagatg ttgtgtccct cctggtgagc gctgtcccag tgcacccgat
aatggcgaag aaaatgtgcc tctttcagga aaagtatagg aaatgagaga agactgtgac
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<211> 72
<212> PRT
 <213> Homo sapiens
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Phe Leu Leu Ile Trp Ser Val Lys Cys Cys Arg Ala Gln Leu Glu Ala
                                 25
 Arg Arg Ser Arg His Pro Ala Asp Gly Ala Gln Gln Glu Arg Cys Cys
Val Pro Pro Gly Glu Arg Cys Pro Ser Ala Pro Asp Asn Gly Glu Glu
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50
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Asn Val Pro Leu Ser Gly Lys Val
                 ~ 70
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actgcggc
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<212> PRT
<213> Homo sapiens
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Asp Asp Leu Ile Ala Glu Met Ala Gly Leu Gln Ala Ala Gln Ser
Ile Arg Glu Ser Leu Asn Lys Ala Asp Val Leu Leu Asn Gly Val Glu
Thr Ser Thr Gly Pro Gln Pro Gly Ala Leu Ala Leu Leu Glu Gln Ala
Val His Glu Leu Asp Gly Thr Gly Asp Ala Asp Pro Arg Ala Ala Glu
                    70
                                        75
Leu Ala Glu Arg Ala Arg Gln Met Ser Tyr Asp Leu Thr Asp Leu Ala
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Ala Ser Val Ala Gly His Ala Ala Arg Ala Glu Ala Asp Pro Gln Arg
           100
                                105
Leu Glu Glu Leu Gly Gly Arg Leu Ala Ala Ile Gln Arg Leu Leu Arg
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Ala Arg Thr Thr Leu Asp Asp Leu Leu Asp Ser Thr Ala
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                        135
<210> 2431
<211> 409
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<212> DNA
<213> Homo sapiens
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409
<210> 2432
<211> 108
<212> PRT
<213> Homo sapiens
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Thr Ile Ser Gly Ala Lys Asn Ala Ala Leu Pro Ile Leu Phe Ala Thr
Leu Leu Ser Glu Gly Asp Ile Asn Leu Ser Asn Val Pro Leu Leu Lys
Asp Ile Ala Thr Thr Ile Glu Leu Leu Lys Glu Leu Gly Ala Thr Ala
                        55
Thr Gln Thr Gln His Cys Val His Ile Asn Ala Lys Glu Val Lys Asn
                    70
                                        75
Tyr Thr Ala Ser Tyr Glu Leu Val Arg Ser Met Arg Ala Ser Ile Leu
Ala Leu Gly Pro Leu Val Ala Arg Phe Gly Glu Ala
            100
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<213> Homo sapiens
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getetatgat geteacgtaa caatgaaate acggaatete teteteagaa cattteeceg
ttgtgaagca gcacgtgact ataatctttt cccaggttta cccctgaagt tcaagtgcaa
240
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                                 25
Lys Ser Lys Gly Cys Val Trp Asn Thr Ala Val Thr Glu Lys Val Leu
                             40
Phe Ala Gln Ser Ala Arg Pro Leu Leu Leu Ser Leu Met Ser Pro Asp
                         55
                                             60
Trp Ala Phe Ile Val Pro Cys Thr Glu Ala Ser Leu Ser Pro Arg Ser
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Cys Leu Phe Gly Arg Gly Ser Thr Asn Gly Ser Thr Leu Pro Pro Thr
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Pro Thr Ala Arg Pro Ala Gly Pro Val Val Gln Leu Glu Lys Ala Arg
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                                 105
Leu Leu Ser Ser Pro Ala Leu Cys Cys Ala Gly Ala Leu His Leu Asn
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Phe Arg Gly Lys Pro Gly Lys Arg Leu
    130
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<211> 401
<212> DNA
<213> Homo sapiens
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240
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<213> Homo sapiens
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Ala Pro Phe Ile Val Phe Glu Asp Ala Asp Ile Asp Gln Ala Val Gln
Gly Ala Met Gly Ala Lys Met Arg Asn Ile Gly Glu Ala Cys Thr Ala
Ala Asn Arg Phe Leu Val His Glu Ser Val Ala Glu Glu Phe Ser Glu
                   70
Lys Leu Val Ala Glu Phe Glu Lys Leu Asn Leu Gly Asn Gly Met Asp
                                   90
Glu Gly Ile Thr Cys Gly Pro Leu Val Glu Ser Lys Ala Leu Glu Ser
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Ile Ala Ala Leu Val Asp Asp Ala Ala Glu Lys Gly Ala Thr Ile Ser
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Thr Gly Gly Lys Arg
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<210> 2437
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<212> DNA
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449
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  <213> Homo sapiens
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 Cys Asp Thr Val Thr Gly Pro Cys Ser Gly Leu Asp Ser Cys Ile Arg
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 Val Leu Asp Gly Asn Arg Trp His Ser Lys Gly Gly Ala Gln Phe Arg
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 Glu Met Pro Met Tyr Gly Phe Gly Pro Met Pro Gln Pro Asp Leu Arg
 Asp Leu Arg Gly Ser Ala Pro Arg Pro Pro Leu His Ile Cys Asp Pro
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 Thr His Phe His Pro Ser Ala Thr Phe Lys Phe Gln Ser Phe His Phe
                 85
 Ile Ala Val
 <210> 2439
 <211> 4425
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 <213> Homo sapiens
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780
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Pro Ala Ala Ala Glu Trp Ala Cys Leu Leu Arg Pro Leu Arg Gly Arg
Glu Pro Glu Gly Val Trp Asn Leu Leu Ser Ile Val Arg Glu Met Phe
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Lys Arg Arg Asp Ser Asn Ala Ala Pro Leu Leu Glu Ile Leu Thr Asp
                                    90
Gln Cys Leu Thr Tyr Glu Gln Ile Thr Gly Trp Trp Tyr Ser Val Arg
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            100
Thr Ser Ala Ser His Ser Ser Ala Ser Gly His Thr Gly Arg Ser Asn
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Gly Gln Ser Glu Val Ala Ala His Ala Cys Ala Ser Met Cys Asp Glu
                                            140
                        135
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Met Val Thr Leu Trp Arg Leu Ala Val Leu Asp Pro Ala Leu Ser Pro
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                    150
Gln Arg Arg Glu Leu Cys Thr Gln Leu Arg Gln Trp Gln Leu Lys
                165
Val Ile Glu Asn Val Lys Arg Gly Gln His Lys Lys Thr Leu Glu Arg
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           .180
Leu Phe Pro Gly Phe Arg Pro Ala Val Glu Ala Cys Tyr Phe Asn Trp
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Glu Glu Ala Tyr Pro Leu Pro Gly Val Thr Tyr Ser Gly Thr Asp Arg
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Lys Leu Ala Leu Cys Trp Ala Arg Ala Leu Pro Ser Arg Pro Gly Ala
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Ser Arg Ser Gly Gly Leu Glu Glu Ser Arg Asp Arg Pro Arg Pro Leu
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 Gly Leu Gly Glu Gly Val Pro Ser Ser Gln Arg Gly Pro Arg Arg Leu
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 Gly Lys Ala Lys Ala Leu Gly Gly Ala Gly Ser Gly Ser Lys Gly Ser
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 Ala Gly Gly Ser Lys Arg Arg Leu Ser Ser Glu Asp Ser Ser Leu
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 Glu Pro Asp Leu Ala Glu Met Ser Leu Asp Asp Ser Ser Leu Ala Leu
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                                 345
 Gly Ala Glu Ala Ser Thr Phe Gly Gly Phe Pro Glu Ser Pro Pro Pro
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 Cys Pro Leu His Gly Gly Ser Arg Gly Pro Ser Thr Phe Leu Pro Glu
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                                             380
 Pro Pro Asp Thr Tyr Glu Glu Asp Gly Gly Val Tyr Phe Ser Glu Gly
                    390
                                         395
 Pro Glu Pro Pro Thr Ala Ser Val Gly Pro Pro Gly Leu Leu Pro Gly
                405
                                    410
 Asp Val Cys Thr Gln Asp Asp Leu Pro Ser Thr Asp Glu Ser Gly Asn
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 Gly Leu Pro Lys Thr Lys Glu Ala Ala Pro Ala Val Gly Glu Glu Asp
                            440.
Asp Asp Tyr Gln Ala Tyr Tyr Leu Asn Ala Gln Asp Gly Ala Gly Gly
                        455
                                            460
Glu Glu Glu Lys Ala Glu Gly Gly Ala Gly Glu Glu His Asp Leu Phe
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                                        475
Ala Gly Leu Lys Pro Leu Glu Gln Glu Ser Arg Met Glu Val Leu Phe
                485
                                    490
Ala Cys Ala Glu Ala Leu His Ala His Gly Tyr Ser Ser Glu Ala Ser
                                505
Arg Leu Thr Val Glu Leu Ala Gln Asp Leu Leu Ala Asn Pro Pro Asp
                            520
Leu Lys Gly Lys Lys Asn Lys Val Ser Thr Ser Arg Gln Thr Trp Val
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                                            540
Ala Thr Asn Thr Leu Ser Lys Ala Ala Phe Leu Leu Thr Val Leu Ser
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Glu Arg Pro Glu Arg His Asn Leu Ala Phe Arg Val Gly Met Phe Ala
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                                    570
Leu Glu Leu Gln Arg Pro Pro Ala Ser Thr Lys Ala Leu Glu Val Lys
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Leu Ala Tyr Gln Glu Ser Glu Val Ala Ala Leu Leu Lys Lys Ile Pro
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Leu Gly Pro Ser Glu Met Ser Thr Met Arg Cys Arg Ala Glu Glu Leu
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                                            620
Arg Glu Gly Thr Leu Cys Asp Tyr Arg Pro Val Leu Pro Leu Met Leu
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                                        635
Ala Ser Phe Ile Phe Asp Val Leu Cys Ala Pro Val Val Ser Pro Thr
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Gly Ser Arg Pro Pro Ser Arg Asn Trp Asn Ser Glu Thr Pro Gly Asp
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Glu Glu Leu Gly Phe Glu Ala Ala Val Ala Ala Leu Gly Met Lys Thr
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Thr Val Ser Glu Ala Glu His Pro Leu Leu Cys Glu Gly Thr Arg Arg
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695
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Glu Lys Gly Asp Leu Ala Leu Ala Leu Met Ile Thr Tyr Lys Asp Asp
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Gln Ala Lys Leu Lys Lys Ile Leu Asp Lys Leu Leu Asp Arg Glu Ser
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Gln Thr His Lys Pro Gln Thr Leu Ser Ser Phe Tyr Ser Ser Ser Arg
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          740
Pro Thr Thr Ala Ser Gln Arg Ser Pro Ser Lys His Gly Gly Pro Ser
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Ala Pro Gly Ala Leu Gln Pro Leu Thr Ser Gly Ser Ala Gly Pro Ala
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Gln Pro Gly Ser Val Ala Gly Ala Gly Pro Gly Pro Thr Glu Gly Phe
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                  790
Thr Glu Lys Asn Val Pro Glu Ser Ser Pro His Ser Pro Cys Glu Gly
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               805
Leu Pro Ser Glu Ala Ala Leu Thr Pro Arg Pro Glu Gly Lys Val Pro
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Ser Arg Leu Ala Leu Gly Ser Arg Gly Gly Tyr Asn Gly Arg Gly Trp
                                             845
                          840
Gly Ser Ser Gly Arg Pro Lys Lys Lys His Thr Gly Met Ala Ser Ile
                      855
Asp Ser Ser Ala Pro Glu Thr Thr Ser Asp Ser Ser Pro Thr Leu Ser
                  870
                                     875
Arg Arg Pro Leu Arg Gly Gly Trp Ala Pro Thr Ser Trp Gly Arg Gly
                                 890
              885
Gln Asp Ser Asp Ser Ile Ser Ser Ser Ser Ser Asp Ser Leu Gly Ser
                              905
Ser Ser Ser Ser Gly Ser Arg Arg Ala Ser Ala Ser Gly Gly Ala Arg
                                             925
                          920
Ala Lys Thr Val Glu Val Gly Arg Tyr Lys Gly Arg Arg Pro Glu Ser
                                         940
                      935
His Ala Pro His Val Pro Asn Gln Pro Ser Glu Ala Ala His Phe
                                      955
                   950
Tyr Phe Glu Leu Ala Lys Thr Val Leu Ile Lys Ala Gly Gly Asn Ser
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               965
Ser Thr Ser Ile Phe Thr His Pro Ser Ser Ser Gly Gly His Gln Gly
                              985
Pro His Arg Asn Leu His Leu Cys Ala Phe Glu Ile Gly Leu Tyr Ala
                                              1005
       995
                          1000
Leu Gly Leu His Asn Phe Val Ser Pro Asn Trp Leu Ser Arg Thr Tyr
                                          1020
                      1015
Ser Ser His Val Ser Trp Ile Thr Gly Gln Ala Met Glu Ile Gly Ser
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                  1030
Ala Ala Leu Thr Ile Leu Val Glu Cys Trp Asp Gly His Leu Thr Pro
              1045
                                  1050
Pro Glu Val Ala Ser Leu Ala Asp Arg Ala Ser Arg Ala Arg Asp Ser
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          1060
Asn Met Val Arg Ala Ala Ala Glu Leu Ala Leu Ser Cys Leu Pro His
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Ala His Ala Leu Asn Pro Asn Glu Ile Gln Arg Ala Leu Val Gln Cys
                                         1100
                      1095
Lys Glu Gln Asp Asn Leu Met Leu Glu Lys Ala Cys Met Ala Val Glu
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                                     1115
Glu Ala Ala Lys Gly Gly Gly Val Tyr Pro Glu Val Leu Phe Glu Val
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1125
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 Ala His Gln Trp Phe Trp Leu Tyr Glu Gln Thr Ala Gly Gly Ser Ser
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 Thr Ala Arg Glu Gly Ala Thr Ser Cys Ser Ala Ser Gly Ile Arg Ala
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 Gly Gly Glu Ala Gly Arg Gly Met Pro Glu Gly Arg Gly Pro Gly
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                                           1180
 Thr Glu Pro Val Thr Val Ala Ala Ala Val Thr Ala Ala Ala Thr
                    1190
                                        1195
 Val Val Pro Val Ile Ser Val Gly Ser Ser Leu Tyr Pro Gly Pro Gly
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                                    1210
 Leu Gly His Gly His Ser Pro Gly Leu His Pro Tyr Thr Ala Leu Gln
            1220
                                1225
                                                   1230
 Pro His Leu Pro Cys Ser Pro Gln Tyr Leu Thr His Pro Ala His Pro
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                            1240
                                               1245
 Ala His Pro Met Pro His Met Pro Arg Pro Ala Val Phe Pro Val Pro
    1250
                        1255
                                           1260
 Ser Ser Ala Tyr Pro Gln Val Arg Pro Val Phe Cys Trp Gly Val Arg
                    1270
                                       1275
 His Gly Lys Ile Leu Gly Ile His Arg Gly Leu Glu Trp Val Leu Trp
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 Glu Tyr Asn Trp Ser Val Gly Glu Ser Trp
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120
ccatttgtta ttttgggttt ggtgaacatg cactttgcgt catgcaaatc aggtttctaa
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840	aaggccagag	tgcagacacc	tacaattatt	gccgattcag	ggaagtcgaa
900					•
960		aaacgtccac			
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	aagagaagcc	tagcgaagaa	gggcaggaag	ggcagcatcc	cccggaccat
	tgcatcatag	tcgactcaga	caacttcaag	ttcgtcgtgg	acccatacga
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1320 attccaagac 1380	acattcacgt	cgcgatgggc	gggacatctg	ggaagcaagc	actttcccag
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	tcccatatat	tagtggagag	attggtcgcc	atgaacttgc	aagagtgcca
	ctgctggacc	tggcacggtc	ctaccagagc	ttgaagaggc	acatggagag
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	tcagccaggg	accetecece	agcgacttcc	cgcaaggcag	ccgcctggac
	gcctgcctgt	gtgcgccatg	gggtctgcgt	cggggctgga	gctgcgtctc
2040 ttcccggggc	caggacaagg	geggeeteee	cttggcggcg	ctggtgctga	gttgcttaga
2100 ccaqaaqact	attcagaccg	tgagcctgtt	tttgatttga	gtgttccact	aaacaaacaa
2160					
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aaaaaaaaa 2244	aaaaaaaaa	aaaa			

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 Pro Ile Ser Cys Trp Gly Pro Ser Thr Cys Leu Cys Pro Trp Leu Cys
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                               25
 Pro Ser Ala Asn Pro Ser Pro Pro Pro Gly Ser His Pro Gln Leu Pro
                            40
Ala Arg Ser Pro Leu Pro Gly Pro Leu Pro Ser Pro Trp Cys Ser Leu
                       55
Ser Gln Gly Pro Ser Pro Ser Asp Phe Pro Gln Gly Ser Arg Leu Asp
                    70
                                       75
Leu Glu Leu Cys Leu Pro Val Cys Ala Met Gly Ser Ala Ser Gly Leu
                85
                                   90
Glu Leu Arg Leu Phe Pro Gly Pro Gly Gln Gly Arg Pro Pro Leu Gly
                               105
Gly Ala Gly Ala Glu Leu Leu Arg Pro Glu Asp Tyr Ser Asp Arg Glu
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                           120
                                              125
Pro Val Phe Asp Leu Ser Val Pro Leu Asn Lys Gln Gln Lys Pro Lys
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                                       155
Lys Lys Lys Lys Lys Lys Lys
               165
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<210> 2444
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<213> Homo sapiens
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Met Leu Gln Thr Ala Asp Gly Arg Leu Arg Ile Asp Ile Glu Ser Met
Arg Thr Phe Val Glu Gly Lys Glu Val His Leu Thr Lys Asn Glu Phe
                            40
Leu Ile Val Gln Thr Leu Phe Thr His Pro Asn Lys Ile Tyr Thr Arg
Asp Glu Ile Ile Glu Val Thr Phe Gly Met Asp Tyr Glu Ala Phe Asp
                    70
Arg Ala Ile Asp Thr His Ile Lys Asn Ile Arg Gln Lys Ile Glu Ala
                                    90
Asp Pro Lys Asn Pro Val Tyr Ile Arg Thr Val Tyr Gly Val Gly Tyr
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                                105
            100
Leu Pro Gly Gly Phe Asp Glu Ala
        115
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<213> Homo sapiens
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aggaagcatg tttatcctgt tcagattact gcttctgcca ggctgctgct gctgttgggt
tetgeacatt tgetetttat taageaaatg teagagetgg gtgetggeaa gggaateece
tgtatttaca caggtaaacc tgagagccag agggccccaa accatcctgg ctgcgaggga
caagctatta gagttaataa cagtgcactg gcattccttc aaaatcctaa tggaagcata
aataaaaaga ggaaagtccc ctttacccaa gaacctgaaa aan
403
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<211> 102
<212> PRT
<213> Homo sapiens
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Met Glu Lys Glu His Arg Thr Lys Arg Lys His Val Tyr Pro Val Gln
Ile Thr Ala Ser Ala Arg Leu Leu Leu Leu Gly Ser Ala His Leu
            20
                                25
Leu Phe Ile Lys Gln Met Ser Glu Leu Gly Ala Gly Lys Gly Ile Pro
                            40
                                                45
Cys Ile Tyr Thr Gly Lys Pro Glu Ser Gln Arg Ala Pro Asn His Pro
Gly Cys Glu Gly Gln Ala Ile Arg Val Asn Asn Ser Ala Leu Ala Phe
```

```
65
                     70
                                          75
                                                               80
 Leu Gln Asn Pro Asn Gly Ser Ile Asn Lys Lys Arg Lys Val Pro Phe
                                      90
 Thr Gln Glu Pro Glu Lys
             100
 <210> 2447
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 <212> DNA
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430
c racetact teegeeeget ggegaegega eggeeeegae ggttgetgtg gttggeegae
gcigccaccc cgcagggaca gatcgtcatc gacgacggag ctgtcgaagc tttgacacag
cgtcattcct cgttgttggc ggtgggtgtg actcgggtac acggggattt ccaagcaggc
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teccatgatg aggtgegegt catg
744
<210> 2448
<211> 248
<212> PRT
<213> Homo sapiens
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Xaa Ala Ser Arg Phe Ala Ser His Gly Leu Arg Val Gly Gln Val Leu
Leu Thr Val Asn Asp Leu Val Arg Pro Thr Ser Tyr Arg Asn Ala Trp
                                25
Ser Thr Leu Asp Thr Leu Leu Gly Leu Gly Val Val Pro Ile Val Asn
Glu Asn Asp Thr Val Ala Thr Gly Glu Ile Arg Phe Gly Asp Asn Asp
Arg Leu Ala Ala Leu Val Ala Glu Leu Val Arg Ala Gln Ala Leu Ile
```

WO 00/58473

```
70
                                        75
65
Leu Leu Ser Asp Val Asp Ala Leu Tyr Thr Ala His. Pro Asp Ser Pro
                                    90
                85
Asp Ala Arg Arg Val Glu Val Val Glu Asp Ile Asp Ala Leu Asp Val
                                105
           100
Asp Thr His Lys Ala Gly Ser Gly Val Gly Thr Gly Gly Met Thr Thr
                                                125
                            120
Lys Leu Glu Ala Ala Arg Met Ala Thr Cys Ala Gly Val Pro Val Val
                        135
Leu Ala Ala Val Asp Ala Pro Asp Val Leu Ala Gly Ala Pro Val
                                        155
                    150
Gly Thr Tyr Phe Arg Pro Leu Ala Thr Arg Arg Pro Arg Arg Leu Leu
                                    170
Trp Leu Ala Asp Ala Ala Thr Pro Gln Gly Gln Ile Val Ile Asp Asp
                                185
            180
Gly Ala Val Glu Ala Leu Thr Gln Arg His Ser Ser Leu Leu Ala Val
                            200
        195
Gly Val Thr Arg Val His Gly Asp Phe Gln Ala Gly Asp Pro Val Thr
                        215
Ile Leu Ala Ser Asp Gly Arg Val Val Gly Arg Gly Ile Ala Gln Phe
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Ser His Asp Glu Val Arg Val Met
                245
<210> 2449
<211> 296
<212> DNA
<213> Homo sapiens
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togoatgoaa gagtotocot ogocotgoog gacagtggoo tocatotaco tgootgtott
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<211> 90
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Leu Leu Pro Gly Pro Cys Pro Ile Pro Arg Gly Gln Thr Gly Leu Pro
Arg Met Gln Glu Ser Pro Ser Pro Cys Arg Thr Val Ala Ser Ile Tyr
                                                 45
Leu Pro Val Leu Leu Asp Ser Arg Thr Leu Gln Ser Phe Pro Pro Trp
```

```
50
                          55
                                              60
 Gly Leu Gly Gly Ala Pro Pro Phe Phe Pro Pro Leu Ser Leu Phe Ile
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 Pro Gln Glu Ala Ser Leu Asn Ile Pro Xaa
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 <210> 2451
 <211> 589
 <212> DNA
 <213> Homo sapiens
 <400> 2451
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aaggeetttg cageggeget acagtgegte gaccatggat gegggeagtg caatgeetgt
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360
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420
cggggcgtcc ccagggttgt cgtcgtcgaa gatgccgacc gcatcactga acgcggagct
480
gacgeettge ttaaagetat egaggageet gegeegaaaa eegtetggtt getgtgtgee
cctactccag aggacgtcat cgtcacgatc aggtcgagat gtcggcgcc
589
<210> 2452
<211> 121
<212> PRT
<213> Homo sapiens
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Ile Cys Asn Asp Asp Leu Val Ser Asp Val Leu Thr Gly Val Trp Ala
Asp Leu Val Gly Gln Glu Lys Ala Val Gly Val Leu Arg Arg Ala Ala
Glu Ser Gln Pro Gly Arg Ser Ser His Ala Met Ser His Ala Trp Leu
Ile Thr Gly Pro Pro Gly Ser Gly Arg Ser Asn Ala Ala Lys Ala Phe
Ala Ala Ala Leu Gln Cys Val Asp His Gly Cys Gly Gln Cys Asn Ala
                                    90
Cys Arg Thr Xaa Leu Ser Gly Ala His Pro Asp Val Thr Leu Val Arg
           100
Thr Glu Ala Leu Ser Ile Gly Val Asp
       115
                            120
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<211> 695
<212> DNA
<213> Homo sapiens
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agececega agaaggagea eeaggeteea gatet
695
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<211> 166
<212> PRT
<213> Homo sapiens
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Met Ser Tyr Ser Pro Cys Glu His Thr Gly Trp His Thr His Met Pro
Leu Gly Met Leu Met Ser Ile His Pro Ser Gln Pro Val His Val Leu
Ser Leu Leu Cys Ser His Leu Cys Pro Asn Glu Pro Arg Asp Thr His
                             40
Ala His Pro Tyr Val Val His Thr His Ser Cys Thr Arg Ser His Thr
                                             60
Ser Thr Cys Ser Glu Ala Phe Val Cys Val Gly Ile Cys Ser Met Thr
                                         75
Gln Asn Gly Val Trp Gly Gly Ala Ala Trp Leu Gly Arg Ser His Gln
Pro Ala Ser Glu Thr Leu Pro Thr Cys Pro Ser Trp Pro Arg His Cys
                                 105
Val Ser Gly Leu Gly Phe Ser Pro Gly Pro Gln Asp Thr Pro Asp Lys
                                                 125
Glu Glu Leu Leu Ser Ser Glu Ala Cys Tyr Glu Cys Arg Ile Asn Gly
```

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135
 Leu Ser Pro Arg Asp Arg Pro Arg Arg Ser Ala His Arg Asp His Gln
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                                         155
 Val Thr Trp Val Leu His
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 <210> 2455
 <211> 378
 <212> DNA
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378
<210> 2456
<211> 126
<212> PRT
<213> Homo sapiens
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Gly Val Val Ser Gly Thr Ala Gln Lys Glu Ile His Ala Leu Pro Ile
                                25
Met Lys Ala Leu Pro Met Gly Val Lys Glu Leu Val Leu Gly Glu Ser
                            40
Lys Trp Gln Asp Glu Leu Ile Asn Asn Phe Ile Val Ala Leu Phe Ala
Gly Val Val Leu Leu Phe Ala Val Leu Val Leu Leu Tyr Arg Arg Leu
                    70
Leu Pro Pro Phe Ile Asn Val Met Ser Leu Ala Val Ala Pro Leu Gly
                                    90 .
Gly Leu Ile Gly Leu Trp Leu Thr Asn Thr Pro Ile Ser Met Pro Val
                                105
Tyr Ile Gly Leu Ile Met Leu Leu Gly Ile Val Ala Lys Asn
       115
                            120
                                                125
<210> 2457
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<212> DNA
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<211> 236
<212> PRT
<213> Homo sapiens
<400> 2458
Met Asn Ser Pro Glu Met Ser Glu Cys Asp Ile Leu His Thr Leu Arg
Trp Ser Ser Arg Leu Arg Ile Ser Ser Tyr Val Asn Trp Ile Lys Asp
His Leu Ile Lys Gln Gly Met Lys Ala Glu His Ala Ser Ser Leu Leu
Glu Leu Ala Ser Thr Thr Lys Cys Ser Ser Val Lys Tyr Asp Val Glu
                        55
Ile Val Glu Glu Tyr Phe Ala Arg Gln Ile Ser Ser Phe Cys Ser Ile
                                        75
Asp Cys Ala Thr Ile Leu Gln Leu His Glu Ile Pro Ser Leu Gln Ser
Ile Tyr Thr Leu Asp Ala Ala Ile Leu Lys Gly Pro Gly Leu Phe Gly
                                                     110
                                105
Met Ser Ile Phe Leu Arg Trp Leu Leu Arg Leu Ile Leu Ile Ser Arg
                                                125
                            120
Leu Arg Leu Pro Arg Thr Tyr Phe Gln Pro Arg Cys Asn Ser Leu Thr
Pro Met His Arg Ser Pro Glu Pro Ile Cys Cys Lys Thr Leu Met Lys
```

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<400> 2457

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145
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 Arg Glu Gln Leu Arg Asn Leu Pro Arg Arg Asn Cys Lys Ala Leu Leu
                 165
                                     170
 Leu Phe Trp Leu Leu Ala Leu Ala Gly Ala Arg Gln Ile Leu Trp Val
             180
                                 185
 Arg His Trp Phe Arg Ile Cys His Arg Gln Cys Arg Leu Cys Val Ser
         195
                             200
 Pro Gly Thr Thr Ser Ile Pro Met Asn Phe Pro Ile Leu Asp Pro Gly
                         215
 Ala Met Pro Leu Pro Met Thr Pro Ser Leu His Ala
                     230
 <210> 2459
 <211> 382
 <212> DNA
 <213> Homo sapiens
 <400> 2459
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gctggtcttg agggcggcgt cgtggctgag aaggtcgctg gtctgcccgc aggacagggc
120
ctcaacgcgg ccaatgacga gtatgtcgac atggtagagg ccggcatcat tgacccggcc
180
aaggtgaccc gttcggctct gcagaacgcc gcgtccatcg cggccctgtt cctcaccact
240
gaagccgtca tcgctgacaa gcccgagcct gttaaggctc ccgctggcgg cggtgatatg
gacggtatgg gtggcatggg cggcatgatg tgatcgtgta ttgccttcgc tgatttgagt
gggatgccac tttgccccag gc
382
<210> 2460
<211> 110
<212> PRT
<213> Homo sapiens
<400> 2460
Thr Gly Ala Gln Ile Val Leu Ala Ala Cys Thr Ala Pro Leu Lys Gln
Ile Ala Ile Asn Ala Gly Leu Glu Gly Gly Val Val Ala Glu Lys Val
Ala Gly Leu Pro Ala Gly Gln Gly Leu Asn Ala Ala Asn Asp Glu Tyr
Val Asp Met Val Glu Ala Gly Ile Ile Asp Pro Ala Lys Val Thr Arg
Ser Ala Leu Gln Asn Ala Ala Ser Ile Ala Ala Leu Phe Leu Thr Thr
Glu Ala Val Ile Ala Asp Lys Pro Glu Pro Val Lys Ala Pro Ala Gly
                                    90
Gly Gly Asp Met Asp Gly Met Gly Gly Met Gly Met Met
           100
                                105
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<211> 558
<212> DNA
<213> Homo sapiens
<400> 2461
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tgcaatgctg tttgtcgtca tgctcggggg caagcaccca cgggctaaaa tcgaaattca
cgatgtggta ttcgcagtcg cggatacgct gcaacacacc tacacccaat tgcgcgacgg
ctggttcggc agccctaagg tgtgcatatc gatgcgtgga tggccgtcga tggcgtcgac
ggctggaaag tcgaactcag ccagatggcg ccgcctgccg acgcgcatca cctgtacttc
atcaacctcg gcggctacga ggccaacgct tttggcgagg cccatcatta cctgctggtg
gtcgcccggg acaaacagga agccaagcgc aaggggcagc ggcaaatgtt gcaacactgg
420
teccaggece acacegatgg egtaatggat ategaegaet gettgeegat tgatetggtg
gaeggteget atgtteacet ggtgeaagge eegcaecage egateateea geacaacgae
tacatcatcc tgccgcga
558
<210> 2462
<211> 148
<212> PRT
<213> Homo sapiens
<400> 2462
Met Val Ser Leu Phe Gln Val Ala Arg Thr Asp Leu Gln Cys Cys Leu
                                    10
Ser Ser Cys Ser Gly Ala Ser Thr His Gly Leu Lys Ser Lys Phe Thr
                                25
Met Trp Tyr Ser Gln Ser Arg Ile Arg Cys Asn Thr Pro Thr Pro Asn
Cys Ala Thr Ala Gly Ser Ala Ala Leu Arg Cys Ala Tyr Arg Cys Val
Asp Gly Arg Arg Trp Arg Arg Leu Glu Ser Arg Thr Gln Pro Asp
                    70
Gly Ala Ala Cys Arg Arg Ala Ser Pro Val Leu His Gln Pro Arg Arg
                                    90
Leu Arg Gly Gln Arg Phe Trp Arg Cly Pro Ser Leu Pro Ala Gly Gly
                                105
Arg Pro Gly Gln Thr Gly Ser Gln Ala Gln Gly Ala Ala Ala Asn Val
                                                 125
                            120
Ala Thr Leu Val Pro Gly Pro His Arg Trp Arg Asn Gly Tyr Arg Arg
                                             140
                        135
Leu Leu Ala Asp
145
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<210> 2463
 <211> 333
 <212> DNA
 <213> Homo sapiens
 <400> 2463
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 ttcggcctgc tgattattct gttatacgtc gcgctggcgc tgtgngcgcc gctgctggcg
120
ccctatggcg aaacccaggt ggtgggtgaa ggcttcgcgc cgtggagcgg ccagtttttg
ctgggcaccg ataacctggg gcgcgacatg ttcagccgcc tgatgtacgg cgcgcgcaat
240
accttgggca ttgccttcct gacgacgacg ctggcgtttc tgctcggtgg tttgagcggt
ttggtcgcgg cgatcaaggg cggttgggtc gac
333
<210> 2464
<211> 106
<212> PRT
<213> Homo sapiens
<400> 2464
Met Ser Leu Leu Ser Gln Val Ala Arg Ala Pro Leu Ser Ala Lys Phe
 1
                 5
Gly Leu Leu Ile Ile Leu Leu Tyr Val Ala Leu Ala Leu Xaa Ala Pro
                                 25
Leu Leu Ala Pro Tyr Gly Glu Thr Gln Val Val Gly Glu Gly Phe Ala
                             40
Pro Trp Ser Gly Gln Phe Leu Leu Gly Thr Asp Asn Leu Gly Arg Asp
                                             60
Met Phe Ser Arg Leu Met Tyr Gly Ala Arg Asn Thr Leu Gly Ile Ala
                    70
                                         75
Phe Leu Thr Thr Leu Ala Phe Leu Leu Gly Gly Leu Ser Gly Leu
                85
Val Ala Ala Ile Lys Gly Gly Trp Val Asp
                                105
<210> 2465
<211> 434
<212> DNA
<213> Homo sapiens
<400> 2465
nntcatgagg acattteect catatttggt ggtggtaaat ccctcctggg acacggggaa
atgaccagag gctggcggcc cacctggcag gaacagatgc cagctctgct gcagccatcg
ccccttgage gggtggctct gtgcctcttt ctgcactgct ggtgggtggt gctgttggct
gggtgatgga taccggctgc cagagatggc tcaggtgcca gctgctgggc tatctcaggc
240
```

PCT/US00/08621

```
actggctgct gggctatctc gggtgccggc tgctgggcta tctcaggcgc tggctgctgc
300
tgggctgtct cgggtgctgg ctgttgggac gtctcctgtc ctggcactgg gctctcgggt
getgggtgcc agetgctgcc taccttgcac tgggctctgg gcactcactg cactcgggct
420
tttccatctc cgac
434
<210> 2466
<211> 82
<212> PRT
<213> Homo sapiens
<400> 2466
Trp Ile Pro Ala Ala Arg Asp Gly Ser Gly Ala Ser Cys Trp Ala Ile
Ser Gly Thr Gly Cys Trp Ala Ile Ser Gly Ala Gly Cys Trp Ala Ile
Ser Gly Ala Gly Cys Cys Trp Ala Val Ser Gly Ala Gly Cys Trp Asp
                                                 45
        35
Val Ser Cys Pro Gly Thr Gly Leu Ser Gly Ala Gly Cys Gln Leu Leu
                         55
Pro Thr Leu His Trp Ala Leu Gly Thr His Cys Thr Arg Ala Phe Pro
                                                             80
                                         75
                    70
65
Ser Pro
<210> 2467
<211> 306
<212> DNA
<213> Homo sapiens
<400> 2467
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gtcggcgggc caaggaagaa gtcggtgtcg aggtccgtga aggccggtct ccagttcccc
120
gteggeegea tegggegeta ettgaagaag ggeegetaeg egeagegtgt eggeaeegge
180
geoccegtet acctegeege tgteetegaa tacetegeeg etgaggttet ggagetegee
ggtaatgctg ccagggacaa caagaagact cgcattattc cgcgccacgt gcttctggcg
300
atccgg
306
<210> 2468
 <211> 102
<212> PRT
 <213> Homo sapiens
 <400> 2468
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Met Asp Ser Thr Gly Thr Gly Ala Gly Gly Lys Gly Lys Gly Ala

```
10
 Ala Gly Arg Lys Val Gly Gly Pro Arg Lys Lys Ser Val Ser Arg Ser
 Val Lys Ala Gly Leu Gln Phe Pro Val Gly Arg Ile Gly Arg Tyr Leu
 Lys Lys Gly Arg Tyr Ala Gln Arg Val Gly Thr Gly Ala Pro Val Tyr
 Leu Ala Ala Val Leu Glu Tyr Leu Ala Ala Glu Val Leu Glu Leu Ala
                     70
Gly Asn Ala Ala Arg Asp Asn Lys Lys Thr Arg Ile Ile Pro Arg His
                85
 Val Leu Leu Ala Ile Arq
            100
<210> 2469
<211> 489
<212> DNA
<213> Homo sapiens
<400> 2469
gccggcgtgg cacatggctt ccctgaagcc agcattgccc tggccaagga agctttgcag
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aacagatgag atttcagctg ggacttgcag ccaagtggga tttggccttt tggggagaag
ggaaagggca ttcaaaggcc agggacagag tatggtcaaa ggcatggaga tgaggaagag
gggaccagag cagagggtca ggttggaaag cgagttgggg tcaatctgca aaggggctga
cgtgccaggt aaaaaacagg agcacagttt agttttgtcg gatcatttca ggtggaaggg
cagtgggaat gttggagaaa acactttttg gtgtcgttac attgaatctg ctcatctata
agaataaaac tttatttcat agagttattg tatggctcaa aataggtatg aagaattaag
aaaaagaatt ttagatttaa aatgaaaagg cacctacaaa agtagagtgg tagagttacc
aacgtggag
489
<210> 2470
<211> 115
<212> PRT
<213> Homo sapiens
<400> 2470
Met Ala Ser Leu Lys Pro Ala Leu Pro Trp Pro Arg Lys Leu Cys Arg
Thr Asp Glu Ile Ser Ala Gly Thr Cys Ser Gln Val Gly Phe Gly Leu
                                25
Leu Gly Arg Arg Glu Arg Ala Phe Lys Gly Gln Gly Gln Ser Met Val
Lys Gly Met Glu Met Arg Lys Arg Gly Pro Glu Gln Arg Val Arg Leu
                        55
Glu Ser Glu Leu Gly Ser Ile Cys Lys Gly Ala Asp Val Pro Gly Lys
```

```
8 O
                                        75
                    70
65
Lys Gln Glu His Ser Leu Val Leu Ser Asp His Phe Arg Trp Lys Gly
                                    90
               85
Ser Gly Asn Val Gly Glu Asn Thr Phe Trp Cys Arg Tyr Ile Glu Ser
                                105
           100
Ala His Leu
       115
<210> 2471
<211> 779
<212> DNA
<213> Homo sapiens
<400> 2471
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ctcacatggt ggcccttgac ttctttcaca gtgaggacct ctgcttcatg aggctcataa
gaagaggage taaggactat tttgtcatgg gggcgccaat ccactgcate ttctactata
atteteteat treetgagge aatateaget ccaagatgtg tecaggagtt ettaggataa
gcactgtaaa gatgaacttt cccataaacc ccaattgttc ctgggtcaat atgaattcca
ttcatacggt cacaaaagac tccctctgag gctctaagga gaatcagaag cttttgttcc
ttttctaagg gattttctaa agtaccaact ttcagctccc cgcctgcaat gaccatgcat
gccacactca gaacattgct tctgtccaca gggaagtcta aggtccccat cacatacagc
cctttgaaga attggaaaat ctgtatccac aaggacagtt ctgttgggta aaatgagaac
greatececa gggeetggaa tggtattgtt gtatectece cageettett caacacettg
ccatgtttca gggagggacc attttaaagc tgattcaggg gcagaggtag aagctgaaat
agttgggggc atacetteet teaceeggag aatgaettga aettggeett eacetaaaae
cagataggtg agttgcctca gctggctatt gaagaaccag tcacagcctt ggttctggc
779
<210> 2472
<211> 181
<212> PRT
<213> Homo sapiens
<400> 2472
Met Thr Phe Ser Phe Tyr Pro Thr Glu Leu Ser Leu Trp Ile Gln Ile
Phe Gln Phe Phe Lys Gly Leu Tyr Val Met Gly Thr Leu Asp Phe Pro
Val Asp Arg Ser Asn Val Leu Ser Val Ala Cys Met Val Ile Ala Gly
                             40
Gly Glu Leu Lys Val Gly Thr Leu Glu Asn Pro Leu Glu Lys Glu Gln
```

```
50
                         55
                                             60
Lys Leu Leu Ile Leu Leu Arg Ala Ser Glu Gly Val Phe Cys Asp Arg
                     70
                                         75
Met Asn Gly Ile His Ile Asp Pro Gly Thr Ile Gly Val Tyr Gly Lys
Val His Leu Tyr Ser Ala Tyr Pro Lys Asn Ser Trp Thr His Leu Gly
                                 105
Ala Asp Ile Ala Ser Gly Asn Glu Arg Ile Ile Val Glu Asp Ala Val
                             120
Asp Trp Arg Pro His Asp Lys Ile Val Leu Ser Ser Ser Tyr Glu
                         135
Pro His Glu Ala Glu Val Leu Thr Val Lys Glu Val Lys Gly His His
                     150
                                         155
Val Arg Ile Tyr Glu Arg Leu Lys His Arg His Ile Gly Ser Val His
                 165
                                     170
Val Thr Glu Asp Gly
            180
<210> 2473
<211> 698
<212> DNA
<213> Homo sapiens
<400> 2473
nngtgcacca agaaatggca gcctgacaag ctggtggtgg tatggactcg gcggaaccga
60
cgcatctgct ccaaggccca cagctggcag ccgnnggcat ccagaaccca taccggggca
120
ccgtggtgtg gatggtacnc tgagaatgtg gacatctctg tgaccctcta cagggacccc
cacgtggacc agtatgaggc caaagagtgg acatttatta ttgaaaatga gtctaagggg
cageggaagg tgetggeeac ggeegaggtg gaeetggeec geeatgeeag ggeeegtgee
ntgtccaagt ccncactgag gctgcggctg aagccaaagt cagtgaagac ggtgcaggct
gagetgagee teactettte eggggtgetg etgegggagg geegtgeeae ggaegatgae
atgcagagtc tcgcaagcct catgagtgtg aagcctagtg atgtgggcaa cttggatgac
tttgctgaga gtgatgaaga tgaggctcat ggcccaggag ccccggaggc ccgggctcga
gtcccccagc caggtgggct cacagcctgc tgtggatcga gactgccaag acctggggag
ggagggttac ccgggccacc agccacttgc tgtgcccgcc ctgtgatggg aactcattac
tgcccaggca gtcccaacca acccagcage ctcaattq
698
<210> 2474
<211> 232
<212> PRT
<213> Homo sapiens
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<400> 2474

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10
Arg Arg Asn Arg Arg Ile Cys Ser Lys Ala His Ser Trp Gln Pro Xaa
                                25
           20
Ala Ser Arg Thr His Thr Gly Ala Pro Trp Cys Gly Trp Tyr Xaa Glu
                            40
        35
Asn Val Asp Ile Ser Val Thr Leu Tyr Arg Asp Pro His Val Asp Gln
                                            60
                        55
Tyr Glu Ala Lys Glu Trp Thr Phe Ile Ile Glu Asn Glu Ser Lys Gly
                                        75
                   70
Gln Arg Lys Val Leu Ala Thr Ala Glu Val Asp Leu Ala Arg His Ala
                                    90
Arg Ala Arg Ala Xaa Ser Lys Ser Xaa Leu Arg Leu Arg Leu Lys Pro
                                                     110
                                105
            100
Lys Ser Val Lys Thr Val Gln Ala Glu Leu Ser Leu Thr Leu Ser Gly
                            120
Val Leu Leu Arg Glu Gly Arg Ala Thr Asp Asp Asp Met Gln Ser Leu
                                            140
                        135
Ala Ser Leu Met Ser Val Lys Pro Ser Asp Val Gly Asn Leu Asp Asp
                                        155
                    150
Phe Ala Glu Ser Asp Glu Asp Glu Ala His Gly Pro Gly Ala Pro Glu
                                    170
Ala Arg Ala Arg Val Pro Gln Pro Gly Gly Leu Thr Ala Cys Cys Gly
                                185
            180
Ser Arg Leu Pro Arg Pro Gly Glu Gly Gly Leu Pro Gly Pro Pro Ala
                                                205
                            200
Thr Cys Cys Ala Arg Pro Val Met Gly Thr His Tyr Cys Pro Gly Ser
                        215
Pro Asn Gln Pro Ser Ser Leu Asn
                    230
<210> 2475
<211> 1251
<212> DNA
<213> Homo sapiens
<400> 2475
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agececetee tggeetgetg geageceate etectgetgg tgetgggete agtgetgtea
ggeteggeca egggetgece geecegetge gagtgeteeg eecaggaceg egetgtgetg
180
tgocacegea agegetttgt ggcagtecee gagggeatee ecacegagae gegeetgetg
gacctaggca agaaccgcat caaaacgctc aaccaggacg agttcgccag cttcccgcac
ctggaggagc tggagctcaa cgagaacatc gtgagcgccg tggagcccgg cgccttcaac
aacctcttca acctccggac gctgggtctc cgcagcaacc gcctgaagct catcccgcta
ggcgtcttca ctggcctcag caacctgacc aagctggaca tcagcgagaa caagatcgtt
480
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Xaa Cys Thr Lys Lys Trp Gln Pro Asp Lys Leu Val Val Trp Thr

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atcctactgg actacatgtt tcaggacctg tacaacctca agtcactgga ggttggcgac
 aatgacctcg tctacatctc tcaccgcgcc ttcagcggcc tcaacagcct ggagcagctg
 600
 acgetggaga aatgeaacet gacetecate eccaeegagg egetgteeca eetgeaegge
 ctcatcgtcc tgaggetccg gcacctcaac atcaatgcca tccgggacta ctccttcaag
 aggetgtace gacteaaggt ettggagate teccaetgge ectaettgga caccatgaca
 780
 cccaactgcc tctacggcct caacctgacg tccctgtcca tcacacactg caatctgacc
 getgtgeect acetggeegt cegecaceta gtetatetee getteeteaa ceteteetae
 aaccccatca gcaccattga gggctccatg ttgcatgagc tgctccggct gcaggagatc
 cagctggtgg gcgggcagct ggccgggtgg agccctgcct tccgcggcct caactacetg
 1020
 cgcgtgctca atgtctctgg caaccagctg accacactgg aggaatcagt cttccactcg
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ctgtgggtgt tecggegecg tggcctacaa acttcaaccg gcagcagece acgtgcgcca
1200
cgcccgagtt tgtccagggg caaggagttc aaggacttcc ctgatgtgct a
1251
<210> 2476 .
<211> 417
<212> PRT
<213> Homo sapiens
<400> 2476
Xaa Ala Pro Glu Met Gln Val Ser Lys Arg Met Leu Ala Gly Gly Val
                                     10
Arg Ser Met Pro Ser Pro Leu Leu Ala Cys Trp Gln Pro Ile Leu Leu
            20
Leu Val Leu Gly Ser Val Leu Ser Gly Ser Ala Thr Gly Cys Pro Pro
Arg Cys Glu Cys Ser Ala Gln Asp Arg Ala Val Leu Cys His Arg Lys
Arg Phe Val Ala Val Pro Glu Gly Ile Pro Thr Glu Thr Arg Leu Leu
                                        75
Asp Leu Gly Lys Asn Arg Ile Lys Thr Leu Asn Gln Asp Glu Phe Ala
                                    90
Ser Phe Pro His Leu Glu Glu Leu Glu Leu Asn Glu Asn Ile Val Ser
                                105
Ala Val Glu Pro Gly Ala Phe Asn Asn Leu Phe Asn Leu Arg Thr Leu
                            120
Gly Leu Arg Ser Asn Arg Leu Lys Leu Ile Pro Leu Gly Val Phe Thr
                        135
Gly Leu Ser Asn Leu Thr Lys Leu Asp Ile Ser Glu Asn Lys Ile Val
145
                    150
Ile Leu Leu Asp Tyr Met Phe Gln Asp Leu Tyr Asn Leu Lys Ser Leu
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165
                                    170
Glu Val Gly Asp Asn Asp Leu Val Tyr Ile Ser His Arg Ala Phe Ser
                                185
Gly Leu Asn Ser Leu Glu Gln Leu Thr Leu Glu Lys Cys Asn Leu Thr
                            200
        195
Ser Ile Pro Thr Glu Ala Leu Ser His Leu His Gly Leu Ile Val Leu
                                            220
                        215
Arg Leu Arg His Leu Asn Ile Asn Ala Ile Arg Asp Tyr Ser Phe Lys
                                        235
                    230
Arg Leu Tyr Arg Leu Lys Val Leu Glu Ile Ser His Trp Pro Tyr Leu
                                    250
                245
Asp Thr Met Thr Pro Asn Cys Leu Tyr Gly Leu Asn Leu Thr Ser Leu
                                265
                                                    270
            260
Ser Ile Thr His Cys Asn Leu Thr Ala Val Pro Tyr Leu Ala Val Arg
                                                285
                            280
His Leu Val Tyr Leu Arg Phe Leu Asn Leu Ser Tyr Asn Pro Ile Ser
                                            300
                        295
Thr Ile Glu Gly Ser Met Leu His Glu Leu Leu Arg Leu Gln Glu Ile
                                        315
                    310
Gln Leu Val Gly Gly Gln Leu Ala Gly Trp Ser Pro Ala Phe Arg Gly
                                     330
                325
Leu Asn Tyr Leu Arg Val Leu Asn Val Ser Gly Asn Gln Leu Thr Thr
                                345
            340
Leu Glu Glu Ser Val Phe His Ser Val Gly Asn Leu Glu Thr Leu Ile
                                                 365
                            360
Leu Asp Ser Asn Pro Leu Ala Cys Asp Cys Arg Leu Leu Trp Val Phe
                        375
    370
Arg Arg Arg Gly Leu Gln Thr Ser Thr Gly Ser Ser Pro Arg Ala Pro
                                        395
                    390
Arg Pro Ser Leu Ser Arg Gly Lys Glu Phe Lys Asp Phe Pro Asp Val
                                     410
                405
Leu
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<210> 2477 <211> 548 <212> DNA

<213> Homo sapiens

<400> 2477

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120
aagtgtgagg agttcccgtc cagcctgtca tcagtctcc caggtcttga agcggcggcc
180
ctgctcctgg ccgtgaccat ggaccctctg gagaccccta tcaaggatgg catcctcac
240
cagcagcatg tcaagtttgg caagaagtgc tggcggaagg tgtgggctct gctgtatgca
300
ggaggcccat caggcgtggc acggctgga aactgggagg tccgggatgg tggcctgga
360
gcagcgggtg acaggtcgc ggggcctggc cggcgagggg agcgacgggt catccgctg
420

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gctgactgtg tgtccgtgct gccggctgac ggcgagagct gcccccggga caccggtgcc
 ttcctgctca ccaccaccga gcgaagccat ctactggctg ctcagcaccg ccaggcctgg
 atgggccc
 548
 <210> 2478<211> 113
 <212> PRT
 <213> Homo sapiens
 <400> 2478
 Leu Glu Thr Pro Ile Lys Asp Gly Ile Leu Tyr Gln Gln His Val Lys
                                     10
 Phe Gly Lys Lys Cys Trp Arg Lys Val Trp Ala Leu Leu Tyr Ala Gly
             20
 Gly Pro Ser Gly Val Ala Arg Leu Glu Asn Trp Glu Val Arg Asp Gly
 Gly Leu Gly Ala Ala Gly Asp Arg Ser Ala Gly Pro Gly Arg Arg Gly
Glu Arg Arg Val Ile Arg Leu Ala Asp Cys Val Ser Val Leu Pro Ala
                                         75
Asp Gly Glu Ser Cys Pro Arg Asp Thr Gly Ala Phe Leu Leu Thr Thr
                85
                                     90
Thr Glu Arg Ser His Leu Leu Ala Ala Gln His Arg Gln Ala Trp Met
            100
                                 105
                                                     110
Gly
<210> 2479
<211> 324
<212> DNA
<213> Homo sapiens
<400> 2479
gaattcatgg aggtctatga ggaggatgaa gaatatgcgt atgaaaaata tgaaacccat
ttcggcacga gctggatgga ggagaccgca ggcaccttct cactgaactg gtatcgcagc
aggtactgga atgacaatga agcagcagaa aggcttgcgt tgatgtgggc taaaaccttc
180
aaatatgcgt cgataaacgt ctcctggcag accgggatta gcaatagcga cgacgagggc
aatgaagatg aagacatgtt ctacgccggt atctccattc cgctgggagg cggggcgtac
tctaactcct ggtatcgtga atat
324
<210> 2480
<211> 108
<212> PRT
<213> Homo sapiens
<400> 2480
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Glu Phe Met Glu Val Tyr Glu Glu Asp Glu Glu Tyr Ala Tyr Glu Lys
Tyr Glu Thr His Phe Gly Thr Ser Trp Met Glu Glu Thr Ala Gly Thr
Phe Ser Leu Asn Trp Tyr Arg Ser Arg Tyr Trp Asn Asp Asn Glu Ala
                            40
Ala Glu Arg Leu Ala Leu Met Trp Ala Lys Thr Phe Lys Tyr Ala Ser
Ile Asn Val Ser Trp Gln Thr Gly Ile Ser Asn Ser Asp Asp Glu Gly
                   70
Asn Glu Asp Glu Asp Met Phe Tyr Ala Gly Ile Ser Ile Pro Leu Gly
               85
Gly Gly Ala Tyr Ser Asn Ser Trp Tyr Arg Glu Tyr
           100
<210> 2481
<211> 484
<212> DNA
<213> Homo sapiens
<400> 2481
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agecetaaag geaagegtat tgaagetegt tteeetgate caacegetaa eccataceta
gcattttcag ctatgttgat ggctggtatc gatggtatca aaaacaagat tcaccctggc
gatgcagcag acaaagattt gtacgacctt ccagctgaag aagcagccgc tatccctcaa
gttgctagca gcttagaaga agcgcttaag tgcctagatc aagaccgtga gttcttgact
caaggtggcg ttttctctga cgacatgatc gatgcttaca tcgctcttaa agcagaagaa
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<213> Homo sapiens
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Phe Glu Ala Pro Val Met Leu Ala Tyr Ser Ala Arg Asn Arg Ser Ala
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Ser Ile Arg Ile Pro Tyr Val Ala Ser Pro Lys Gly Lys Arg Ile Glu
                            40
Ala Arg Phe Pro Asp Pro Thr Ala Asn Pro Tyr Leu Ala Phe Ser Ala
                                          . 60
                        55
    50
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Met Leu Met Ala Gly Ile Asp Gly Ile Lys Asn Lys Ile His Pro Gly
                     70
                                          75
 Asp Ala Ala Asp Lys Asp Leu Tyr Asp Leu Pro Ala Glu Glu Ala Ala
                 85
                                      90
 Ala Ile Pro Gln Val Ala Ser Ser Leu Glu Glu Ala Leu Lys Cys Leu
                                 105
 Asp Gln Asp Arg Glu Phe Leu Thr Gln Gly Gly Val Phe Ser Asp Asp
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 Met Ile Asp Ala Tyr Ile Ala Leu Lys Ala Glu Glu Ala Gln Arg Val
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 Ala Met Thr Thr Pro Leu Glu Phe Glu Leu Tyr Tyr Ser Leu
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120
cgtccccagc cgcttcctcc tggccttgtt cccccttccc tgtgaaggag agaacagttt
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cggctggccc tgagatgctg gcaggcctgc agtcagggca gtgggcgcct cccaccttga
240
aatggtcctt cgtggtgcag ttctgcttac ggggtagact ttgttgcctt ccacagagga
300
cagttagggt gggcaggaag gaagtctctg ccacaagtct gcattccagg ctgtttccag
aagtgggaat tototogtgo cotggagtot gggaatgoat ttttagttto coagettoag
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<210> 2484
<211> 130
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<213> Homo sapiens
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Met His Ser Gln Thr Pro Gly His Glu Arg Ile Pro Thr Ser Gly Asn
Ser Leu Glu Cys Arg Leu Val Ala Glu Thr Ser Phe Leu Pro Thr Leu
            20
Thr Val Leu Cys Gly Arg Gln Gln Ser Leu Pro Arg Lys Gln Asn Cys
Thr Thr Lys Asp His Phe Lys Val Gly Gly Ala His Cys Pro Asp Cys
Arg Pro Ala Ser Ile Ser Gly Pro Ala Glu Thr Val Leu Ser Phe Thr
                    70
Gly Lys Gly Glu Gln Gly Gln Glu Glu Ala Ala Gly Asp Ala Gly Asp
                85
                                    90
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Gly Val Ala Asp Arg Gly Ser Glu Val Ser Ser Glu Ala Ala Cys Ser
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          . 100
                                105
Pro Glu Gly Pro Gln Ala Arg Val Arg Arg Glu Arg Glu Glu Pro Arg
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                                                125
Phe Gly
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<210> 2485
<211> 608
<212> DNA
<213> Homo sapiens
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aagacccgcg actgcaacga ggtgctcttt gtcgatgcag ttgaacatcg ctggatcgag
120
gagetgggtg gtatgaactt catggccatc agcaaagacg gtcagetegt cacececgag
ctagetggca ccatectgcg tggcgtgacc cgcaagtcca ttctggaagt tgcccccgac
cteggtettg aaccagtgga gegeaagate gatgttgaeg ageteettga tggegttege
tetggegagt teceggaagt ettegeetgt ggtacegeeg eggttgteae acegategge
tettteetag atggagatae egaegtgaag gtetetgage ecaeeggaaa gaeeaegatg
gagateegte geegtetget ggatateeag tteggaegeg etgaggaeae eeatggetgg
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600
gaacgcgt
608
<210> 2486
<211> 165
<212> PRT
<213> Homo sapiens
<400> 2486
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Gln Ile Asp Ala Lys Thr Arg Asp Cys Asn Glu Val Leu Phe Val Asp
Ala Val Glu His Arg Trp Ile Glu Glu Leu Gly Gly Met Asn Phe Met
                             40
Ala Ile Ser Lys Asp Gly Gln Leu Val Thr Pro Glu Leu Ala Gly Thr
                         55
Ile Leu Arg Gly Val Thr Arg Lys Ser Ile Leu Glu Val Ala Pro Asp
                                         75
Leu Gly Leu Glu Pro Val Glu Arg Lys Ile Asp Val Asp Glu Leu Leu
                                     90
                85
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Asp Gly Val Arg Ser Gly Glu Phe Pro Glu Val Phe Ala Cys Gly Thr
                                  105
 Ala Ala Val Val Thr Pro Ile Gly Ser Phe Leu Asp Gly Asp Thr Asp
         115
                              120
                                                  125
 Val Lys Val Ser Glu Pro Thr Gly Lys Thr Thr Met Glu Ile Arg Arg
 Arg Leu Leu Asp Ile Gln Phe Gly Arg Ala Glu Asp Thr His Gly Trp
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                                        . 155
 Leu Lys Arg Val Cys
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 <213> Homo sapiens
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 aaggaggccg caagcagtgt ggacgtgcag gccctgcgga ggctctttga ggccgtgccc
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339
<210> 2488
<211> 113
<212> PRT
<213> Homo sapiens
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Xaa Pro Ser Gly Glu Gln Pro Met Glu Gly Pro Pro Gln Gly Ala Pro
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Glu Ser Pro Asp Ser Leu Gln Arg Asn Gln Lys Glu Leu Gln Gly Leu
Leu Thr Gln Val Gln Ala Leu Glu Lys Glu Ala Ala Ser Ser Val Asp
Val Gln Ala Leu Arg Arg Leu Phe Glu Ala Val Pro Gln Leu Gly Gly
                        55
Ala Ala Pro Gln Ala Pro Ala Ala His Gln Lys Pro Glu Ala Ser Val
                    70
Glu Gln Ala Phe Gly Glu Leu Thr Arg Val Ser Thr Glu Val Ala Gln
                                    90
Leu Lys Glu Gln Thr Leu Val Arg Leu Leu Asp Ile Glu Glu Ala Val
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His
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<210> 2489

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<211> 594
<212> DNA
<213> Homo sapiens
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ateggeggeg cagtattegg ctacategea ggttteaget tetaetteee gaaagegtte
ggetteaage tgeacgaaag etggggeaag getgeattet ggttetggat etegggette
360
ttcgtcgcgt tcatgccgct ctatgcactg ggtttcatgg gcatgacccg ttgtttgaac
geocececa cocctgagtg ggtcccgtac ctgtacgttg ccatggtcgg tgcactgatg
ategetgteg gtategeetg ceagttgatt cagetgtatg teagegtgeg tgategeaag
cagaacatgt gcgaatccgg cgacccatgg aatgcacaca ccctggaatg gtcg
<210> 2490
<211> 198
<212> PRT
<213> Homo sapiens
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Val Lys Leu Phe Asn Trp Leu Val Thr Ile Tyr His Gly Arg Val Arg
Ile Thr Ser Gln Val Leu Trp Thr Leu Gly Phe Met Val Thr Phe Ala
Ile Gly Gly Met Thr Gly Val Leu Leu Ala Ile Pro Gly Ala Asp Phe
                        55
Val Leu His Asn Ser Leu Phe Gly Ile Ala His Phe His Asn Val Ile
                                         75
Ile Gly Gly Ala Val Phe Gly Tyr Ile Ala Gly Phe Ser Phe Tyr Phe
                                     90
Pro Lys Ala Phe Gly Phe Lys Leu His Glu Ser Trp Gly Lys Ala Ala
                                105
            100
Phe Trp Phe Trp Ile Ser Gly Phe Phe Val Ala Phe Met Pro Leu Tyr
                            120
Ala Leu Gly Phe Met Gly Met Thr Arg Cys Leu Asn Ala Pro Pro Thr
                                             140
    130
Pro Glu Trp Val Pro Tyr Leu Tyr Val Ala Met Val Gly Ala Leu Met
                                         155
Ile Ala Val Gly Ile Ala Cys Gln Leu Ile Gln Leu Tyr Val Ser Val
                                     170 -
                165
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```
Arg Asp Arg Lys Gln Asn Met Cys Glu Ser Gly Asp Pro Trp Asn Ala
                                  185
 His Thr Leu Glu Trp Ser
         195
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 <211> 592
 <212> DNA
 <213> Homo sapiens
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 gatettgeag tgttegaaag eggaaetgta tteegegeeg teaeteegge tgeggeaeeg
 180
 cgtcccggtg tcgacgagcg cccctccgat gaagtccttg ccgagatcga cgccgccttg
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<210> 2492
<211> 197
<212> PRT
<213> Homo sapiens
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Thr Arg His Ala Thr Val Lys Leu Ala Asn Pro Leu Asp Asp Thr Arg
Pro Tyr Leu Arg Thr Thr Leu Leu Pro Gly Leu Phe His Ala Val Thr
Thr Asn Met Ser Arg Ser Gln Asp Asp Leu Ala Val Phe Glu Ser Gly
                             40
Thr Val Phe Arg Ala Val Thr Pro Ala Ala Ala Pro Arg Pro Gly Val
Asp Glu Arg Pro Ser Asp Glu Val Leu Ala Glu Ile Asp Ala Ala Leu
Pro Ala Gln Pro Arg Met Leu Ala Ala Val Ile Cys Gly Ser Trp Leu
                                    90
Pro Asp Arg Trp Asp Gly Glu Ser Val Lys Ala Asp Trp Arg His Ala
                                105
Val Leu Val Ala Gln Lys Ala Ala Asp Ala Leu Gly Val Arg Leu Val
        115
                            120
                                                125
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Arg Lys Ala Asp Arg Gln Ala Pro Trp His Pro Gly Arg Cys Ala Ala
                        135
Leu Ile Val Asp Gly Lys Val Ile Gly His Ala Gly Glu Leu His Pro
                                        155
                    150
Thr Val Val Ser Lys Ala Gly Leu Pro Gln Arg Thr Cys Ala Val Glu
                                    170
                165
Phe Asn Leu Asp Ala Leu Val Ala Cys Ala Pro Ser Gly Gly Glu Val
                                185
Met Val Ile Ser Arg
        195
<210> 2493
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<212> DNA
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ctatcgaact acctcatgct cgaacctcat tcggtcatca agaccatcga ctcttcccta
cctacgggat ctatcaatgt ctccctggct gaggaagccc aaaagtacgg cgcacaagtg
atcccgctgg ttgaaaatgc caacctagac accgtgtggc tggggttgcg cgtcattggc
aagggegeca ggeggggage egaeegetet teeteggtet acetecaget gaegteggtg
gaggggcctg gggacttcac tgcctatatc actgggacct ttggtcgacc tcagatct
418
<210> 2494
<211> 139
<212> PRT
<213> Homo sapiens
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Thr Arg Gln Val Ala Gly Asp Arg Ala Thr Val Thr Ser Met Val Pro
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Ser Gly Ala Asp Pro His Thr Tyr Glu Pro Ser Leu Arg Asp Val Arg
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            20
Thr Val Val Tyr Ser Arg Val Ala Leu Ser Asn Tyr Leu Met Leu Glu
                             40
Pro His Ser Val Ile Lys Thr Ile Asp Ser Ser Leu Pro Thr Gly Ser
                         55
Ile Asn Val Ser Leu Ala Glu Glu Ala Gln Lys Tyr Gly Ala Gln Val
                     70
Ile Pro Leu Val Glu Asn Ala Asn Leu Asp Thr Val Trp Leu Gly Leu
                                     90
Arg Val Ile Gly Lys Gly Ala Arg Arg Gly Ala Asp Arg Ser Ser Ser
                                 105
Val Tyr Leu Gln Leu Thr Ser Val Glu Gly Pro Gly Asp Phe Thr Ala
                             120
        115
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Tyr Ile Thr Gly Thr Phe Gly Arg Pro Gln Ile
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 eggecagtge ctactgeect etettgeege eegeacetge ageceegeac etgeegettg
 cacctgcage ecogogetet accoggitea ageatggetg accaggegee ettegacaeg
 gacgtcaaca ccctgacccg cttcgtcatg gaggagggca ggaaggcccg cggcacgggc
 gagttgaccc agetgeteaa etegetetge acageagtea aagecatete tteggeggtg
 cgcaaggcgg gcatcgcgca cctctatggc attgctggtt ctaccaacgt gacaggtgat
 420
 caagttaaga agctggacgt cetetecaae gaeetggtta tgaacatgtt aaagteatee
 480
 tttgccacgt gtgttctcgt gtcagaagaa gataaacacg ccatcatagt ggaaccggag
540
aaaaggggta aatatgtggt ctgttttgat ccccttgatg gatcttccaa catcgattgc
600
cttgtgtccg ttggaaccat ttttggcatc tatagaaaga aatcaactga tgagccttct
gagaaggatg ctctgcaacc aggccggaac ctggtggcag ccggctacgc actgtatggc
720
agtgccacca tgctggtcct tgccatggac tgtggggtca actgcttcat gctggacccg
gccatcgggg agttcatttt ggtggacaag gatgtgaaga taaaaaagaa aggtaaaatc
tacageetta acgagggeta egecaaggae tttgaceetg eegteactga gtacateeag
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aagageeeca atggaaaget gagaetgetg tacgaatgea acceeatgge ctacgteatg
gagaaggetg ggggaatgge caccactggg aaggaggeeg tgttagaegt catteceaca
gacattcacc agagggcgcc ggtgatcttg gggtcccccg acgacgtgct cgagttcctg
aaggtgtatg agaagcactc tgcccagtga gcacctgccc tgcctgcatc cggagaattg
1260
cetetacetg gacettttgt etcacaeage agtaceetga eetgetgtge acettacatt
1320
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cctagagagc agaaataaaa agcatgacta tttccaccat caaatgctgt agaatgcttg
geacteceta accaaatget gtetecataa tgecactggt gttaagatat attttgagtg
gatggaggag aaataaactt attcctcctt aaaaaaaa
1478
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<211> 338
<212> PRT
<213> Homo sapiens
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Phe Val Met Glu Glu Gly Arg Lys Ala Arg Gly Thr Gly Glu Leu Thr
                                25
            20
Gln Leu Leu Asn Ser Leu Cys Thr Ala Val Lys Ala Ile Ser Ser Ala
                                                45
                            40
        35
Val Arg Lys Ala Gly Ile Ala His Leu Tyr Gly Ile Ala Gly Ser Thr
Asn Val Thr Gly Asp Gln Val Lys Lys Leu Asp Val Leu Ser Asn Asp
                                        75
Leu Val Met Asn Met Leu Lys Ser Ser Phe Ala Thr Cys Val Leu Val
                                    90
               85
Ser Glu Glu Asp Lys His Ala Ile Ile Val Glu Pro Glu Lys Arg Gly
                                105
Lys Tyr Val Val Cys Phe Asp Pro Leu Asp Gly Ser Ser Asn Ile Asp
                                                125
                           120
        115
Cys Leu Val Ser Val Gly Thr I'le Phe Gly Ile Tyr Arg Lys Lys Ser
                        135
Thr Asp Glu Pro Ser Glu Lys Asp Ala Leu Gln Pro Gly Arg Asn Leu
                    150
                                        155
Val Ala Ala Gly Tyr Ala Leu Tyr Gly Ser Ala Thr Met Leu Val Leu
                                    170
                165
Ala Met Asp Cys Gly Val Asn Cys Phe Met Leu Asp Pro Ala Ile Gly
                                185
Glu Phe Ile Leu Val Asp Lys Asp Val Lys Ile Lys Lys Lys Gly Lys
                                                205
                            200
        195
Ile Tyr Ser Leu Asn Glu Gly Tyr Ala Lys Asp Phe Asp Pro Ala Val
                                            220
                        215
Thr Glu Tyr Ile Gln Arg Lys Lys Phe Pro Pro Asp Asn Ser Ala Pro
                                        235
                    230
Tyr Gly Ala Arg Tyr Val Gly Ser Met Val Ala Asp Val His Arg Thr
                                     250
                245
Leu Val Tyr Gly Gly Ile Phe Leu Tyr Pro Ala Asn Lys Lys Ser Pro
                                                     270
                                265
            260
Asn Gly Lys Leu Arg Leu Leu Tyr Glu Cys Asn Pro Met Ala Tyr Val
                            280
Met Glu Lys Ala Gly Gly Met Ala Thr Thr Gly Lys Glu Ala Val Leu
                    300
Asp Val Ile Pro Thr Asp Ile His Gln Arg Ala Pro Val Ile Leu Gly
                                         315
                    310
Ser Pro Asp Asp Val Leu Glu Phe Leu Lys Val Tyr Glu Lys His Ser
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325 330 335 Ala Gln <210> 2497 <211> 399 <212> DNA <213> Homo sapiens <400> 2497 acgegtgtet tggceggtga aaccetteee geageaggtt cagtacgteg caceggegag cttggctacc tgccacagga tccccgcgac ccagacatgg aaatgatcgc gagggcaagg atcctgtcag cgcgtggcct ggaccacata ctggaacgga tgcgcaccct ggagtatcag atggcgaacg gttccgagga cgaccgtgcc gttgcgatgg acaaatacgc gaaggctgaa gaccgtctcg tcgcggccgg tggctatggc gcctctgcag aggcagcccg aatcgcgtcg aacttggggc ttgacgaccg cgtcctttcc cagccgttga aaaacctctc gggtggtcag cgtcgtcgcg tcgagctggc gcgcatcctc ttttccgga 399 <210> 2498 <211> 133 <212> PRT <213> Homo sapiens <400> 2498 Thr Arg Val Leu Ala Gly Glu Thr Leu Pro Ala Ala Gly Ser Val Arg Arg Thr Gly Glu Leu Gly Tyr Leu Pro Gln Asp Pro Arg Asp Pro Asp 25 Met Glu Met Ile Ala Arg Ala Arg Ile Leu Ser Ala Arg Gly Leu Asp 40 His Ile Leu Glu Arg Met Arg Thr Leu Glu Tyr Gln Met Ala Asn Gly 55 Ser Glu Asp Asp Arg Ala Val Ala Met Asp Lys Tyr Ala Lys Ala Glu 70 Asp Arg Leu Val Ala Ala Gly Gly Tyr Gly Ala Ser Ala Glu Ala Ala 90 Arg Ile Ala Ser Asn Leu Gly Leu Asp Asp Arg Val Leu Ser Gln Pro 105 Leu Lys Asn Leu Ser Gly Gly Gln Arg Arg Arg Val Glu Leu Ala Arg 115 120 Ile Leu Phe Ser Gly 130 <210> 2499 <211> 348 <212> DNA <213> Homo sapiens

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Gly Val Pro Glu Tyr Asp Asp Arg Ala Leu Tyr Glu Lys Leu Ile Leu
                                25
Asp Gly Phe Gln Ala Gly Leu Ser Trp Ile Thr Ile Leu Arg Lys Arg
Asp Asn Phe Arg Lys Ala Phe Asp Asp Phe Gln Pro Glu Lys Ile Ala
Arg Tyr Asn Glu Lys Lys Val His Ala Leu Met Asn Asp Ala Gly Ile
Val Arg Asn Arg Ala Lys Ile Glu Gly Thr Ile Ala Ser Ala Lys Ala
                                    90
                85
Tyr Leu Asp Ile Met Glu Lys Gly Pro Gly Phe Ser Arg Leu Leu Trp
                                105
Asp Phe Val Asp
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<211> 569
<212> DNA
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acttagcaca gggcctgacc tatagtaatg gtcaagaatg atagcggggg tgaggtatgg
ctttcaagag tcaaacaatt ttactggtgc atcatttcca tttattcttt ctcttttgca
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300
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WO 00/58473

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tagattotat agottoaact cootgaagag atgtgtgota atttacatca aaaaaatcot
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 tatattgtta agtttccact taatttttaa gggacactag agaattagta tgactcacct
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 569
 <210> 2502
 <211>.100
 <212> PRT
 <213> Homo sapiens
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Met Ile Ala Gly Val Arg Tyr Gly Phe Gln Glu Ser Asn Asn Phe Thr
Gly Ala Ser Phe Pro Phe Ile Leu Ser Leu Leu His Asn Lys Thr Thr
                                 25
                                                     30
Leu Lys Ile Leu Pro Trp Leu Val Arg Asp Asn Ser Ser Leu Glu Ser
Arg Phe Tyr Ser Phe Asn Ser Leu Lys Arg Cys Val Leu Ile Tyr Ile
Lys Lys Ile Leu Lys Gly Ile Lys Tyr Ala Lys Asn Cys Gln His His
                    70
Arg Leu Pro Leu Val Ala Ser Gly Ile Leu Leu Ser Phe His Leu Ile
Phe Lys Gly His
            100
<210> 2503
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<212> DNA
<213> Homo sapiens
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120
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240
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<210> 2504
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Leu Tyr Ser Pro Val Cys Thr Asn Gly Glu Arg Phe Leu Tyr Leu Pro
            20
Pro Pro His Tyr Val Gly Pro His Ile Pro Ser Ser Leu Ala Ser Pro
                            40
Met Arg Leu Ser Thr Pro Ser Ala Ser Pro Ala Ile Pro Pro Leu Val
                                            60
                        55
His Cys Ala Asp Lys Ser Leu Pro Trp Lys Met Gly Val Ser Pro Gly
                                        75
Asn Pro Val Asp Ser His Ala Tyr Pro His Ile Gln Asn Ser Lys Gln
                85
Pro Arg Val Pro Ser Ala Lys Ala Val Thr Ser Gly Leu Pro Gly Asp
                                105
Thr Ala Leu Leu Leu Pro Pro Ser Arg
        115
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<212> DNA
<213> Homo sapiens
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240
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<210> 2506
<211> 72
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<213> Homo sapiens
<400> 2506
Ser Gly Ala Asn Pro Thr Gln Ala Leu Val Trp Ser Gln Val Leu Leu
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 Asp Arg Arg Leu Met Gly Gln Trp Thr Asn Gly Arg Val Met Ala Ala
Ile Ala Trp Ile Val Val Ala Ala Val Ser Ala Leu Asn Val Val Leu
 Val Val Glu Thr Val Met Gly Ala
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<210> 2508
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<212> PRT
<213> Homo sapiens
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<400> 2508

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Leu Phe Ser Gln His Lys Cys Ala Gln His Arg Pro Phe Thr Cys Phe
His Trp His Phe Leu Asn Gln Arg Arg Arg Pro Leu Arg Arg Arg
Asp Gly Thr Phe Asn Tyr Ser Pro Asp Val Tyr Cys Ser Lys Tyr Asn
                       55
Glu Ala Thr Gly Val Cys Pro Asp Gly Asp Glu Cys Pro Tyr Leu His
                                      75
                   70
Arg Thr Thr Gly Asp Thr Glu Arg Lys Tyr His Leu Arg Tyr Tyr Lys
                                  90
Thr Gly Thr Cys Ile His Glu Thr Asp Ala Arg Gly His Cys Val Lys
                                                  110
                               105
           100
Asn Gly Leu His Cys Ala Phe Ala His Gly Pro His Asp Leu Arg Ser
                                              125
                           120
Pro Val Tyr Asp Ile Arg Glu Leu Gln Ala Met Glu Ala Leu Gln Asn
                                          140
                       135
Gly Gln Thr Thr Val Glu Gly Ser Ile Glu Gly Gln Ser Ala Gly Ala
                                      155
                   150
Ala Ser His Ala Met Ile Glu Lys Ile Leu Ser Glu Glu Pro Arg Trp
                                   170
Gln Glu Thr Ala Tyr Val Leu Gly Asn Tyr Lys Thr Glu Pro Cys Lys
                               185
Lys Pro Pro Arg Leu Cys Arg Gln Gly Tyr Ala Cys Pro Tyr Tyr His
                                              205
                           200
Asn Ser Lys Asp Arg Arg Ser Pro Arg Lys His Lys Tyr Arg Ser
                       215
Ser Pro Cys Pro Asn Val Lys His Gly Asp Glu Trp Gly Asp Pro Gly
                                       235
                   230
Lys Cys Glu Asn Gly Asp Ala Cys Gln Tyr Cys His Thr Arg Thr Glu
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               245
Gln Gln Phe His Pro Glu Ile Tyr Lys Ser Thr Lys Cys Asn Gly Arg
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Gly Gly Gly Val Arg Glu
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<213> Homo sapiens
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cggcaggttg ccgagggcaa acacgttgac cacgttcgca ccgacaccac cgaccacggc
caccgctccc agcggaatct cgtagactta gcgccagggt tggtaaggcg tgtagcggtc
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 <213> Homo sapiens
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 Phe Val Asp Ala Arg Glu Val Leu Leu Pro Ala Thr Ile Gly Leu Asp
Val His Glu Arg Val Glu Pro Gly Lys Thr Glu Thr Gln Pro Ile Leu
                             40
Gly Asp Ala Gly Arg Gln Val Ala Glu Gly Lys His Val Asp His Val
                         55
Arg Thr Asp Thr Thr Asp His Gly His Arg Ser Gln Arg Asn Leu Val
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                                         75
Asp Leu Ala Pro Gly Leu Val Arg Arg Val Ala Val Val Thr Thr Gly
Asp Leu Glu Leu Gly Ala Ser Lys Ser Ser Ala Val
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                                 105
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660
gac
663
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<211> 221
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Xaa Arg Val Trp Asp His Ile Arg Gly Ala Arg Trp Phe Ser Gly Lys
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Gly Arg Gly Gly Ser Leu Thr Arg Leu Leu Ser Leu Ala Pro Val Val
                                25
            20
Asn Glu Gln Asp Leu Gln Val Leu Pro Val Ile Ala His Val Gly Tyr
                            40
        35
Pro Gln Ala Ala Asp Glu Tyr Tyr Gln Leu Leu Leu Ala Leu Arg Pro
                        55
Gly Arg Val Ala Gly Leu Ala Glu Ile Val Val Asn Gly Gln Pro Phe
                                        75
                    70
Thr Val Thr Asp Ala Thr Glu Asp Glu Leu Ala Leu Thr Ala Trp Ala
                                    90
                85
Arg Ile Leu Leu Glu Gly Thr Pro Ile Ala Met Asp Gly Ser Trp Gln
                                105
Leu His Arg Arg Arg Ala Ala Pro Glu Pro Val Arg Phe Ala Lys Arg
                            120
        115
Phe Gly Gly Glu Gln Ser Asn Thr Ser Ile Met Val Gly Asp Ala Ile
                        135
Ile Ile Lys Met Phe Arg Arg Leu Glu Pro Gly Asp Asn Leu Asp Ile
                                        155
                    150
Thr Val His Ser Ala Leu Asn Asp Ala Gly Ile Ser Ser Val Ala Thr
                                    170
                165
Leu Tyr Gly Phe Met Ser Gly Gln Ile Pro Ala Glu Glu His Ile Pro
                                185
            180
Val Asp Leu Ala Met Ile Ile Glu Arg Leu Pro Gln Pro Arg Asp Gly
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Trp Glu Leu Ile Thr Ala Lys Ala Val Asp Leu Val Asp
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360
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 Ser Lys Val Arg Gln Leu Asp Leu Ala Lys Asn Arg Leu Tyr Gln Ala
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 Ile Gln Arg Ala Asp Asp Ile Leu Asp Leu Lys Phe Cys Met Asp Gly
                             40
 Val Gln Thr Ala Leu Arg Ser Glu Asp Tyr Glu Gln Ala Ala His
                         55
 Ile His Arg Tyr Leu Cys Leu Asp Lys Ser Val Ile Glu Leu Ser Arg
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 Gln Gly Lys Glu Gly Gln His Pro Lys Leu Glu His Asp
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 <211> 351
 <212> DNA
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120
tatcagtcca tccctaaaag ccaaccaggc tctcccgagg gaggcaggaa atccctgctc
180
cetecatece ecacegggaa tgetgeaggg ggettgaggg aggegacaca gtggggaget
ctgggtgcag gtgggcagac aatgggccaa cacacccct cagccccgct ccagtatcag
cattccagac ccacccacct gggcccttgg tcaccgggag acctcacgcg t
351
<210> 2516
<211> 98
<212> PRT
<213> Homo sapiens
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Thr Gly Gln Leu Glu Tyr Gln Ser Ile Pro Lys Ser Gln Pro Gly Ser
                                25
Pro Glu Gly Gly Arg Lys Ser Leu Leu Pro Pro Ser Pro Thr Gly Asn.
Ala Ala Gly Gly Leu Arg Glu Ala Thr Gln Trp Gly Ala Leu Gly Ala
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55
    50
Gly Gly Gln Thr Met Gly Gln His Thr Pro Ser Ala Pro Leu Gln Tyr
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Gln His Ser Arg Pro Thr His Leu Gly Pro Trp Ser Pro Gly Asp Leu
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Thr Arg
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<212> DNA
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120
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cagtgttgag tgggcagtgt ctcactccag cccctccttc ccaggccagt tcttctcatc
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356
<210> 2518
<211> 103
<212> PRT
<213> Homo sapiens
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Pro Asn Pro Met Gly Leu Phe Ser Ser Pro Asn Leu Ala Gly Leu Ala
                             40
Glu Ala Thr His Ser Leu Gly Thr Glu Leu Gln Gly Ala Gly Ser Leu
                                             60
Ser Arg Lys Arg Pro Val Leu Ser Gly Gln Cys Leu Thr Pro Ala Pro
                                         75
                    70
Pro Ser Gln Ala Ser Ser Ser His Leu Pro Gln Ser Phe Pro Ser Arg
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Pro Ser Ser Thr Gly Gln Thr
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<213> Homo sapiens
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<400> 2519

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Leu Pro Cys Trp Gly Arg Cys Ser Ser Ser Phe Gln Arg Arg Lys Arg
Gly Trp Gly Val Ala Gly Arg Gly Ser Ser Arg Pro Glu Ser Gln Ser
                        55
Arg Trp Arg Ala Ala Ser Thr Arg Phe Leu Leu Val Gly Leu Arg Gln
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                                        75
Gly Leu Ala Pro Gly Leu Ser Gly Lys Arg Glu Glu Glu Leu Arg Leu
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Arg Gly Ala Val Leu Pro Arg Arg Leu Thr Gly
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<210> 2521
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<212> DNA
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                             40
Cys Ser Gly Ala Ala Thr Pro Thr Pro Ser Leu Pro Pro Pro Pro Ala
    50
Asn Asp Ser Asp Thr Ser Thr Gly Gly Cys Gln Gly Ser Tyr Arg Cys
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70
 Gln Pro Gly Val Leu Leu Pro Val Trp Glu Pro Asp Asp Pro Ser Leu
                85
                                    90
 Gly Asp Lys Ala Ala Arg Ala Val Val Tyr Phe Val Ala Met Val Tyr
                                105
 Met Phe Leu Gly Val Ser Ile Ile Ala Asp Arg Phe Met Ala Ala Ile
                            120
 Glu Val Ile Thr Ser Lys Glu Lys Glu Ile Thr Ile Thr Lys Ala Asn
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 Gly Glu Thr Ser Val Gly Thr Val Arg Ile Trp Asn Glu Thr Val Ser
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 Asn Leu Thr Leu Met Ala Leu Gly Ser Ser Ala Pro Glu Ile Leu Leu
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Ser Val Ile Glu Val Cys Gly His Asn Phe Gln Ala Gly Glu Leu Gly
                                185
 Pro Gly Thr Ile Val Gly Ser Ala Ala Phe Asn Met Phe Val Val Ile
                            200
Ala Val Cys Ile Tyr Val Ile Pro Ala Gly Glu Ser Arg Lys Ile Lys
                        215
                                           220
His Leu Arg Val Phe Phe Val Thr Ala Ser Trp Ser Ile Phe Ala Tyr
                    230
                                       235
Val Trp Leu Tyr Leu Ile Leu Ala Val Phe Ser Pro Gly Val Val Gln
               245
                                    250
Val Trp Glu Ala Leu Leu Thr Leu Val Phe Phe Pro Val Cys Val Val
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Phe Ala Trp Met Ala Asp Lys Arg Leu Leu Phe Tyr Lys Tyr Val Tyr
                            280
Lys Arg Tyr Arg Thr Asp Pro Arg Ser Gly Ile Ile Gly Ala Glu
                        295
Gly Asp Pro Pro Lys Ser Ile Glu Leu Asp Gly Thr Phe Val Gly Ala
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Glu Ala Pro Gly Glu Leu Gly Gly Leu Gly Pro Gly Pro Ala Glu Ala
                325
                                   330
Arg Glu Leu Asp Ala Ser Arg Arg Glu Val Ile Gln Ile Leu Lys Asp
                                345
Leu Lys Gln Lys His Pro Asp Lys Asp Leu Glu Gln Leu Val Gly Ile
                            360
Ala Asn Tyr Tyr Ala Leu Leu His Gln Gln Lys Ser Arg Ala Phe Tyr
                        375
                                           380
Arg Ile Gln Ala Thr Arg Leu Met Thr Gly Ala Gly Asn Val Leu Arg
                   390
                                       395
Arg His Ala Ala Asp Ala Ser Arg Arg Ala Ala Pro Ala Glu Gly Ala
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Gly Glu Asp Glu Asp Asp Gly Ala Ser Arg Ile Phe Phe Glu Pro Ser
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Leu Tyr His Cys Leu Glu Asn Cys Gly Ser Val Leu Leu Ser Val Thr
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Cys Gln Gly Glu Gly Asn Ser Thr Phe Tyr Val Asp Tyr Arg Thr
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                                           460
Glu Asp Gly Ser Ala Lys Ala Gly Ser Asp Tyr Glu Tyr Ser Glu Gly
                   470
                                       475
Thr Leu Val Phe Lys Pro Gly Glu Thr Gln Lys Glu Leu Arg Ile Gly
               485
                                   490
Ile Ile Asp Asp Asp Ile Phe Glu Glu Asp Glu His Phe Phe Val Arg
```

													-10		
			500				_	505		~ 3		Dh -	510	220) CD
Leu	Leu		Leu	Arg	Val	GIY		Ala	GIn	GIA	met		Glu	PLU	Asp
		515		_	_		520	•	••- 1	N3-	Dwa	525	T 011	בוג	Thr
Gly		Gly	Arg	Pro	Lys		Arg	Leu.	vaı	Ala		reu	Leu	Ala	1111
	530			_	_	535	•••		~ 1	T1.	540	C 0 W	Dho	Gl n) en
Val	Thr	Ile	Leu	Asp		Asp	HIS	Ala	GIY		Phe	Ser	Phe	GIII	560
545			_		550		_		-1	555	*** 1	3	17-1	A	
_				565					570				Val	575	
Val	Arg	Ser		Gly	Ala	Arg	Gly	Thr 585	Val	Arg	Leu	Pro	Tyr 590	Arg	Thr
Val	Asp	Gly	580 Thr	Ala	Arg	Gly	Gly		Val	His	Tyr	Glu	Asp	Ala	Cys
		595					600				_	605	_		
Gly	Glu 610	Ļeu	Glu	Phe	Gly	Asp 615	Asp	Glu	Thr	Met	Lys 620	Thr	Leu	GIn	vai
Lvs		Val	Asp	Asp	Glu	Glu	Tyr	Glu	Lys	Lys	Asp	Asn	Phe	Phe	Ile
625			•		630					635					640
Glu	Leu	Gly	Gln	Pro	Gln	Trp	Leu	Lys	Arg	Gly	Ile	Ser	Ala	Leu	Leu
				645					650					655	
Leu	Asn	Gln	Gly 660	Asp	Gly	Asp	Arg	Lys 665	Leu	Thr	Ala	Glu	Glu 670	Glu	Glu
71=) ra	Ara	TIE	Δla	Glu	Met	Glv		Pro	Val	Leu	Gly	Glu	Asn	Cys
VIG	Arg	675		,,,,			680	-1-				685			-
Ara	Leu		Val	Ile	Ile	Glu		Ser	Tyr	Asp	Phe	Lys	Asn	Thr	Val
λīg	690		· 			695	-			_	700	_			
ASD	Lvs	Leu	Ile	Lvs	Lvs		Asn	Leu	Ala	Leu	Val	Ile	Gly	Thr	His
705	_,_			-1-	710					715					720
Ser	Trp	Arg	Glu	Gln 725	Phe	Leu	Glu	Ala	Ile 730	Thr	Val	Ser	Ala	Gly 735	Asp
Glu	Glu	Glu			Asp	Gly	Ser			Glu	Arg	Leu	Pro 750	Ser	Cys
		_	740			-1	•	745	77-7	Dho	т	1 110		T.em	Dhe
		755					760					765	Val		
Ala	Cys	Val	Pro	Pro	Thr	Glu	Tyr	Cys	His	Gly		Ala	Cys	Phe	Gly
	770					775				_	780			_	
Val	Ser	Ile	Leu	Val	Ile	Gly	Leu	Leu	Thr		Leu	Ile	Gly	Asp	Leu
785					790		_		_	795	_	•	**- 3	x '	800
				805					810				Val	815	
Val	Val	Phe	Val 820	Äla	Leu	Gly	Thr	Ser 825		Pro	Asp	Thr	Phe 830	Ala	Ser
Lvs	Val	Ala	Ala	Leu	Gln	Asp	Gln	Cys	Ala	Asp	Ala	Ser	Ile	Gly	Asn
		835					840					845			
Val	Thr	Gly	Ser	Asn	Ala	Val	Asn	Val	Phe	Leu	Gly	Leu	Gly	Val	Ala
	850		•			855					860				
Trp	Ser	Val	Ala	Ala	Val	Tyr	Trp	Ala	Val	Gln	Gly	Arg	Pro	Phe	Glu
865					870					875					880
Val	Arg	Thr	Gly	Thr	Leu	Ala	Phe	Ser	Val	Thr	Leu	Phe	Thr	Val	Phe
				885					890					895	
Ala	Phe	Val	Gly	Ile	Ala	Val	Leu	Leu	Tyr	Arg	Arg	Arg	Pro	His	Ile
			900					905					910		
Gly	Gly	Glu	Leu	Gly	Gly	Pro	Arg	Gly	Pro	Lys	Leu	Ala	Thr	Thr	Ala
		915					920					925			
Leu	Phe	Leu	Gly	Leu	Trp	Leu	Leu	Tyr	Ile	Leu	Phe	Ala	Ser	Leu	Glu

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930
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 Ala Tyr Cys His Ile Arg Gly Phe
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 <213> Homo sapiens
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 ttcagccgaa aaattgttgg tgttgctaca cgctcgacga tgcgtaccga tgcgctqccc
 120
 atggaggett tggageatge gttaacgaet geagggegaa tteatggaaa ceagttaatt
 caccatagcg atcggggcag ccagtacgtg tcactgaagt attccaccgc gttagcgqaa
 teeggaatee gteegagtgt gggaacagte ggegattett atgacaatge tetageegaa
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ggagaagtcg aattggccac cttgcggnnn nn
392
<210> 2524
<211> 130
<212> PRT
<213> Homo sapiens
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Xaa Ile Thr Tyr Val Arg Thr Leu Ser Gly Phe Ala Tyr Thr Ala Phe
· 1
Val Val Asp Val Phe Ser Arg Lys Ile Val Gly Val Ala Thr Arg Ser
            20
                                 25
Thr Met Arg Thr Asp Ala Leu Pro Met Glu Ala Leu Glu His Ala Leu
Thr Thr Ala Gly Arg Ile His Gly Asn Gln Leu Ile His His Ser Asp
Arg Gly Ser Gln Tyr Val Ser Leu Lys Tyr Ser Thr Ala Leu Ala Glu
                    70
                                         75
Ser Gly Ile Arg Pro Ser Val Gly Thr Val Gly Asp Ser Tyr Asp Asn
                85
                                     90
Ala Leu Ala Glu Thr Val Asn Gly Leu Tyr Lys Ala Glu Leu Ile His
                                 105
Ala Gln Gly Pro Trp Thr Ser Val Gly Glu Val Glu Leu Ala Thr Leu
        115
                             120
                                                 125
Arg Xaa
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<210> 2525
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<212> DNA
<213> Homo sapiens
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teceetttga atacgtggtg etgteacege egegggaate aagaacegea egttgegeaa
120
ategetgege taegeaceaa egtggtegge aagatgttgg teageggega geecegenaa
180
tgattcatat ctccgatatc agcacgacag gggcgtcatt ccgctctgca catcggcttg
240
gaagtcagcg gtgcgcccgc acgcctgcga tttcgggtga agacgcgcga ctaccattca
300
gaactggtgg ccgcaacact cattcgcagc gagaagcccg ccgatttgcc caacacctat
caatacggcg tggaattc
378
<210> 2526
<211> 111
<212> PRT
<213> Homo sapiens
<400> 2526
Met Ala Val Cys Arg Ile Pro Phe Glu Tyr Val Val Leu Ser Pro Pro
 1
Arg Glu Ser Arg Thr Ala Arg Cys Ala Asn Arg Cys Ala Thr His Gln
Arg Gly Arg Gln Asp Val Gly Gln Arg Arg Ala Pro Xaa Met Ile His
                             40
Ile Ser Asp Ile Ser Thr Thr Gly Ala Ser Phe Arg Ser Ala His Arg
                         55
Leu Gly Ser Gln Arg Cys Ala Arg Thr Pro Ala Ile Ser Gly Glu Asp
                                         75
                    70
Ala Arg Leu Pro Phe Arg Thr Gly Gly Arg Asn Thr His Ser Gln Arg
                                     90
Glu Ala Arg Arg Phe Ala Gln His Leu Ser Ile Arg Arg Gly Ile
                                 105
            100
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<211> 305
<212> DNA
<213> Homo sapiens
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cagatecaga gagaegaeet tggagecagt ceccagagea geagecagee agaecaegge
cgcctctccc ccccagaagc tcccgacagg cccaccatct ccacggcctc cgagacctca
gtgtacgtga cctggattcc ccgtgggaat ggtgggttcc caatccagtc cttccgtgtg
gagtacaaga agctaaagaa agtgggagac tggattctgg ccaccagcgc catccccca
 300
```

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cgcgt
 305
 <210> 2528
 <211> 101
 <212> PRT
 <213> Homo sapiens
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 Xaa Val Thr Phe Arg Met Gly Arg Arg Pro Lys Pro Glu Ile Met Ala
 Ser Lys Glu Gln Gln Ile Gln Arg Asp Leu Gly Ala Ser Pro Gln
 Ser Ser Ser Gln Pro Asp His Gly Arg Leu Ser Pro Pro Glu Ala Pro
 Asp Arg Pro Thr Ile Ser Thr Ala Ser Glu Thr Ser Val Tyr Val Thr
                         55
Trp Ile Pro Arg Gly Asn Gly Gly Phe Pro Ile Gln Ser Phe Arg Val-
Glu Tyr Lys Lys Leu Lys Lys Val Gly Asp Trp Ile Leu Ala Thr Ser
                                     90
Ala Ile Pro Pro Arg
            100
<210> 2529
<211> 387
<212> DNA
<213> Homo sapiens
<400> 2529
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tgtgtcctcc gtgccccccg agtggcctgc tagcccgctc tcccacacag tctccttqat
120
gtgaagtgtc acceggettg ctgcggegtg tetecgeegt aacaegtgta taceggetca
180
gccatggcgg cggctgctgg gaaggctcct gcgtatggct ttgccatccg ggacccgggc
240
tttgctctgc aggggtgggc ttctgagcag aggaaggcca gaggtaacca ggtccatgca
egtttgtgtc tttccacaat gtegggettt tatggatget tttagtetca gtcacaaaag
ccatgagete cacaggttee tgaggga
387
<210> 2530
<211> 121
<212> PRT
<213> Homo sapiens
<400> 2530
Met Ala Phe Val Thr Glu Thr Lys Ser Ile His Lys Ser Pro Thr Leu
Trp Lys Asp Thr Asn Val His Gly Pro Gly Tyr Leu Trp Pro Ser Ser
```

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20
                                25
Ala Gln Lys Pro Thr Pro Ala Glu Gln Ser Pro Gly Pro Gly Trp Gln
                            40
Ser His Thr Gln Glu Pro Ser Gln Gln Pro Pro Pro Trp Leu Ser Arg
Tyr Thr Arg Val Thr Ala Glu Thr Arg Arg Ser Lys Pro Gly Asp Thr
                    70
Ser His Gln Gly Asp Cys Val Gly Glu Arg Ala Ser Arg Pro Leu Gly
                                    90
Gly His Gly Gly His Arg Glu Arg Leu Gln Trp Gln Ser Arg Pro Gly
                                105
            100
Asp Arg Asp Pro Pro Arg Gly Asp Ala
                            120
        115
<210> 2531
<211> 396
<212> DNA
<213> Homo sapiens
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tctagagata caaaaagtac tctatacact gagagacatc tggataaata caaaggttga
getttecaac cagetgaaga tgacaagaet aaaccccaag tegetgeage tetgtgteat
ctcatcagca gccctggaga tgacaaagat agtgctgagg gggaacagac cttcgtcatc
agttaaagat atgctagctt ttcttttct tccagacatt cctgaatcca gagaactttc
ctgtaatgcg tcaaatcctt taggtctcaa ttctttccct agagagacaa ggagcacagt
tegtteccaa ggeececat gettggegag ggegtetetg etttecagge agggteetge
tgcctccacc cacgtgcagg gaaaggaagg acgcgt
396
<210> 2532
<211> 105
<212> PRT
<213> Homo sapiens
<400> 2532
Met Thr Arg Leu Asn Pro Lys Ser Leu Gln Leu Cys Val Ile Ser Ser
                 5
                                     10
Ala Ala Leu Glu Met Thr Lys Ile Val Leu Arg Gly Asn Arg Pro Ser
                                25
Ser Ser Val Lys Asp Met Leu Ala Phe Leu Phe Leu Pro Asp Ile Pro
Glu Ser Arg Glu Leu Ser Cys Asn Ala Ser Asn Pro Leu Gly Leu Asn
Ser Phe Pro Arg Glu Thr Arg Ser Thr Val Arg Ser Gln Gly Pro Pro
                                         75
                     70
Cys Leu Ala Arg Ala Ser Leu Leu Ser Arg Gln Gly Pro Ala Ala Ser
                                     90
                 85
Thr His Val Gln Gly Lys Glu Gly Arg
```

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100
                                105
  <210> 2533
  <211> 495
  <212> DNA
 <213> Homo sapiens
 <400> 2533
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 aggegetace ggggtetect geactgtatg gtgaccageg ttegagagga gggacceegg
 gtccttttca aggggctggt actcaattgc tgccgcgcct tccctgtcaa catggtggtc
 240
 ttcgtcgcct atgaggcagt gctgaggctc gcccggggtc tgctcacata gccggtcccc
 acgeceageg geceaeceae cageagetge tggaggtegt agtggetgga ggaggeaagg
 360
 ggtagtgtgg ctgggttcgg gaccccacag ggccattgcc caggagaatg aggagcctcc
 ctgcagtgtt gtcggccgag gcctgagctc gcctgccca gctactgacc tcaggtcgag
 gggcccgcca gccat
 495
 <210> 2534
 <211> 96
 <212> PRT
 <213> Homo sapiens
<400> 2534
Xaa Arg Pro Asp Val Pro Gly Val Leu Val Ala Gly Gly Cys Ala Gly
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Val Leu Ala Trp Ala Val Ala Xaa Pro Met Asp Val Ile Lys Ser Arg
                               25
Leu Gln Ala Asp Gly Gln Gly Gln Arg Arg Tyr Arg Gly Leu Leu His
                           40
Cys Met Val Thr Ser Val Arg Glu Glu Gly Pro Arg Val Leu Phe Lys
                       55
                                          60
Gly Leu Val Leu Asn Cys Cys Arg Ala Phe Pro Val Asn Met Val Val
                   70
Phe Val Ala Tyr Glu Ala Val Leu Arg Leu Ala Arg Gly Leu Leu Thr
               85
                                  90 .
                                                      95
<210> 2535
<211> 1904
<212> DNA
<213> Homo sapiens
<400> 2535
neggeeeggg aacgtggetg gttggaggag gtagateace etttetgegg gggacgattt
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cgtcggtggt	aggctgctac	catgaggttg	aatcagaaca	ccttgctgct	ggggaagaag
-:	taccctacac	ctcggagcat	gtgcccagca	ggtaccacga	gtggatgaaa
tcagaggagc	tgcagcgttt	gacagecteg	gageegetga	ccctggagca	ggagtatgcc
atgcagtgca 300	gctggcagga	agatgcagac	aagtgtacct	tcattgtgct	ggatgccgag
aagtggcagg 360	cccagccagg	cgccaccgaa	gagagetgea	tggtgggaga	cgtgaacctc
ttcctcacag 420	atctagaaga	ccccaccttg	ggggagatcg	aggtcatgat	tgcagagccc
agctgcaggg 480	gtaagggcct	tggcactgag	gccgttctcg	cgatgctgtc	ttacggagtg
accacgctag 540	gtctgaccaa	gtttgaggct	aaaattgggc	aaggaaatga	accaagcatc
cggatgttcc 600	agaaacttca	ctttgagcag	gtggctacga	gcagtgtttt	tcaggaggtg
accctcagac 660	tgacagtgag	tgagtccgag	catcagtggc	ttctggagca	gaccagecae
gtggaagaga 720	agccttacag	agatgggtcg	gcagagccct	gctgatggct	gggccttgtg
780			gcccatacac		
840			aatcaccttt		
900			tggtgtggct		
960			ccagacccag		
1020			gaaggtggga		
1080		·	ctccttagag		
1140			tectgatttt		
1200	•		cactcaaggg		
1260			ttgacccggg		
1320					ccagtcttga
1380			cttgtggctg		
1440			recettgggg		
1500					tccatctctg
1560					agggtggccg
1620			agagttggcc		
ggagcactct 1680	gactcctaac	agtcttcctt	gecetgecat	catctggggt	ggctggctgt

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caagaaaggc cgggcatgct ttctaaacac agccacagga ggcttgtagg gcatcttcca
 ggtggggaaa cagtcttaga taagtaaggt gacttgccta aggcctccca gcacccttga
 tettggagte teacageaga etgeatgtga acaaetggaa eegaaaacat geeteagtat
 aaaacaaaca ttataaaacg aaaaaaaaaa aaaaaaaaag tact
 1904
 <210> 2536
 <211> 207
 <212> PRT
 <213> Homo sapiens
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 Met Arg Leu Asn Gln Asn Thr Leu Leu Leu Gly Lys Lys Val Val Leu
 Val Pro Tyr Thr Ser Glu His Val Pro Ser Arg Tyr His Glu Trp Met
                                 25
Lys Ser Glu Glu Leu Gln Arg Leu Thr Ala Ser Glu Pro Leu Thr Leu
                             40
Glu Gln Glu Tyr Ala Met Gln Cys Ser Trp Gln Glu Asp Ala Asp Lys
Cys Thr Phe Ile Val Leu Asp Ala Glu Lys Trp Gln Ala Gln Pro Gly
Ala Thr Glu Glu Ser Cys Met Val Gly Asp Val Asn Leu Phe Leu Thr
                                     90
Asp Leu Glu Asp Pro Thr Leu Gly Glu Ile Glu Val Met Ile Ala Glu
                                 105
Pro Ser Cys Arg Gly Lys Gly Leu Gly Thr Glu Ala Val Leu Ala Met
                             120
                                                 125
Leu Ser Tyr Gly Val Thr Thr Leu Gly Leu Thr Lys Phe Glu Ala Lys
                        135
                                             140
Ile Gly Gln Gly Asn Glu Pro Ser Ile Arg Met Phe Gln Lys Leu His
                    150
                                         155
Phe Glu Gln Val Ala Thr Ser Ser Val Phe Gln Glu Val Thr Leu Arg
                                     170
Leu Thr Val Ser Glu Ser Glu His Gln Trp Leu Leu Glu Gln Thr Ser
            180
                                185
His Val Glu Glu Lys Pro Tyr Arg Asp Gly Ser Ala Glu Pro Cys
        195
                            200
<210> 2537
<211> 509
<212> DNA
<213> Homo sapiens
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gatgtcatcg tgctgcggtt ttccggagcc atggcgaagc gtcctgcctc agttatcctt
ccgctgctac tgtcggactc ccccgtcatt gcgtggtggc ccttctccgg ccctgacaac
180
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ctcgcctcgg accccatcgg agcccttgcg gaccgccgca tcaccgactc ggcagctgac
aaagateegt geaaageeet cataegeegt geggeteace taacegaggg tgaeteegae
ctgtgttggg ctcgcaccac cagctggaga gccctagctg cagcagcttt ggatcaacat
360
ccagegaceg teaagttege tegggtagag teageegeeg gtaatgegee ggegatgetg
420
ctggcagcct ggctaggatt gcgtctcggc gtcccggtcg agcgggtgac aaccgacgcg
480
cccggcatct ccgcgatcgt catgtcgac
509
<210> 2538
<211> 169
<212> PRT
<213> Homo sapiens
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Thr Arg Ser Arg Lys Asp Lys Leu Asp Ala Glu Val His Ala Gly Glu
                                    10
Gly Thr Pro Gly Asp Val Ile Val Leu Arg Phe Ser Gly Ala Met Ala
            20
                                25
Lys Arg Pro Ala Ser Val Ile Leu Pro Leu Leu Leu Ser Asp Ser Pro
Val Ile Ala Trp Trp Pro Phe Ser Gly Pro Asp Asn Leu Ala Ser Asp
                                             60
Pro Ile Gly Ala Leu Ala Asp Arg Arg Ile Thr Asp Ser Ala Ala Asp
                    70
Lys Asp Pro Cys Lys Ala Leu Ile Arg Arg Ala Ala His Leu Thr Glu
                                     90
                85
Gly Asp Ser Asp Leu Cys Trp Ala Arg Thr Thr Ser Trp Arg Ala Leu
                                                     110
                                105
Ala Ala Ala Leu Asp Gln His Pro Ala Thr Val Lys Phe Ala Arg
                            120
Val Glu Ser Ala Ala Gly Asn Ala Pro Ala Met Leu Leu Ala Ala Trp
                                             140
                        135
    130
Leu Gly Leu Arg Leu Gly Val Pro Val Glu Arg Val Thr Thr Asp Ala
                                                             160
                                         155
                    150
Pro Gly Ile Ser Ala Ile Val Met Ser
                165
<210> 2539
<211> 453
<212> DNA
<213> Homo sapiens
<400> 2539
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tegeggeatg accegaggat agtgacgtgg gacaatgget acgtgcgttt teteaacgag
cagccgaact acgacctgac gtatgacgac gtcttcatgg caccaaaccg ttcctcggtg
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gggtcccgca tgaacgtcga cctcacgtca acagacgggc taggcactcc tctgcccctc
 gtagtggcca atatgaccgc aattteegga egtegeatgg cagagaccat egecaggege
 ggaggcattg ctgttctgcc ccaagatatc ccggcggatt tcgtcgcccg gtccattcgg
 cgcgtcaaag atgcgcatac tcgattcgac accccagtca ccgtcaaccc gacaacgact
 420
 gtcggtgagg ccatgaactt gctcaacaag cgc
 453
 <210> 2540
 <211> 134
 <212> PRT
 <213> Homo sapiens
 <400> 2540
 Phe Ala Ala Ser Arg His Asp Pro Arg Ile Val Thr Trp Asp Asn Gly
                                     10
Tyr Val Arg Phe Leu Asn Glu Gln Pro Asn Tyr Asp Leu Thr Tyr Asp
            20
Asp Val Phe Met Ala Pro Asn Arg Ser Ser Val Gly Ser Arg Met Asn
Val Asp Leu Thr Ser Thr Asp Gly Leu Gly Thr Pro Leu Pro Leu Val
                        55
                                             60
Val Ala Asn Met Thr Ala Ile Ser Gly Arg Arg Met Ala Glu Thr Ile
                    70
Ala Arg Arg Gly Gly Ile Ala Val Leu Pro Gln Asp Ile Pro Ala Asp
                                    90
Phe Val Ala Arg Ser Ile Arg Arg Val Lys Asp Ala His Thr Arg Phe
                                105
Asp Thr Pro Val Thr Val Asn Pro Thr Thr Thr Val Gly Glu Ala Met
        115
                            120
                                                 125
Asn Leu Leu Asn Lys Arg
    130
<210> 2541
<211> 564
<212> DNA
<213> Homo sapiens
<400> 2541
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ccctgcatgg aacccattgc agggcacacg cagtctacat gtatcccagg ttttatgctc
acagageetg caatacteeg tgtetggaat acgttatttg etgeacacet eecagaggaa
catgtaacgt ctgtgtaaca tgctatcctg cacacatctg aaagaatctg tgtacacaac
actattatgc tgtgcacaca tttcctcata ttctgtgtag agagcacctc attttgtact
caaatattcg gcttccataa caagttacat tgctcacatc ttaaaatatt cattacacqt
360
```

```
gaaaccaccg catggtaccg acatccttct ggaatgtccc gcacagaggc tgatatatgt
geacagitet caetgitetg egigeecage cecteacact ggaegeecae eteacactet
tetgecaagg gagaetttgg tteteceett ecetgtgetg getgtgeggg ceacagteet
ctgcacgcca gcagcatgac gcgt
564
<210> 2542
<211> 106
<212> PRT
<213> Homo sapiens
<400> 2542
Met Leu Cys Thr His Phe Leu Ile Phe Cys Val Glu Ser Thr Ser Phe
Cys Thr Gln Ile Phe Gly Phe His Asn Lys Leu His Cys Ser His Leu
                                25
Lys Ile Phe Ile Thr Arg Glu Thr Thr Ala Trp Tyr Arg His Pro Ser
                                                45
Gly Met Ser Arg Thr Glu Ala Asp Ile Cys Ala Gln Phe Ser Leu Phe
                        55
Cys Val Pro Ser Pro Ser His Trp Thr Pro Thr Ser His Ser Ser Ala
                                        75
                    70
Lys Gly Asp Phe Gly Ser Pro Leu Pro Cys Ala Gly Cys Ala Gly His
                85
Ser Pro Leu His Ala Ser Ser Met Thr Arg
<210> 2543
<211> 387
<212> DNA
<213> Homo sapiens
<400> 2543
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aacgtgccca tgctttctgc accacactgg atgactgaag gggaaggaac gagcgtctta
ccgctcctga tgagattttt gtttttgcct aacaaagaaa tgtgtatgaa tgcacgtctg
tttgcagggg cagggaggag gagggtcctt ggaatagctg ccgacaacag ctggaactcc
tgtctgggtc ccccagctgg gctagagagg gcagtgatca tctgtccact ggacaggaag
gtttgcaaag ggctgtttgc ttactgggtc ccaattttta gccttctgaa gcccctgtcc
aatggggccc agcaggcagc agtgctg
387
<210> 2544
<211> 122
<212> PRT
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<213> Homo sapiens
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 Met Glu Trp Gly Gly Arg Ala Arg Val Gly Thr Cys Trp Asn Val Pro
 Met Leu Ser Ala Pro His Trp Met Thr Glu Gly Glu Gly Thr Ser Val
                                  25
 Leu Pro Leu Met Arg Phe Leu Phe Leu Pro Asn Lys Glu Met Cys
                              40
 Met Asn Ala Arg Leu Phe Ala Gly Ala Gly Arg Arg Arg Val Leu Gly
 Ile Ala Ala Asp Asn Ser Trp Asn Ser Cys Leu Gly Pro Pro Ala Gly
                                          75
 Leu Glu Arg Ala Val Ile Ile Cys Pro Leu Asp Arg Lys Val Cys Lys
                                      90
 Gly Leu Phe Ala Tyr Trp Val Pro Ile Phe Ser Leu Leu Lys Pro Leu
             100
                                 105
 Ser Asn Gly Ala Gln Gln Ala Ala Val Leu
         115
                             120
 <210> 2545
 <211> 336
 <212> DNA
 <213> Homo sapiens
 <400> 2545
 gegattattt tegtgetgee eggaettate atggtegget ggtggteagg ttteeegtae
tggaccacce tegetatetg tetagtegge ggcatecteg gegttatgta etegatteeg
ctgcgtcggg ccctcgtgac aggctcggat cttccctacc cggagggcgt cgcaggagct
gaggtgetca aagtaggega tteegetggt geegeegagg ctaacaaggt gggtetgega
gtcatcatcg teggttetgt ggtetetgca gegtacgece tgttgtegga tettaagett
300
gtgaagtcgg cgctgaccaa gcctttcaag acgggc
336
<210> 2546
<211> 112
<212> PRT
<213> Homo sapiens
<400> 2546
Ala Ile Ile Phe Val Leu Pro Gly Leu Ile Met Val Gly Trp Trp Ser
Gly Phe Pro Tyr Trp Thr Thr Leu Ala Ile Cys Leu Val Gly Gly Ile
                                25
Leu Gly Val Met Tyr Ser Ile Pro Leu Arg Arg Ala Leu Val Thr Gly
Ser Asp Leu Pro Tyr Pro Glu Gly Val Ala Gly Ala Glu Val Leu Lys
```

Val Gly Asp Ser Ala Gly Ala Ala Glu Ala Asn Lys Val Gly Leu Arg

```
70
                                        75
Val Ile Ile Val Gly Ser Val Val Ser Ala Ala Tyr Ala Leu Leu Ser
Asp Leu Lys Leu Val Lys Ser Ala Leu Thr Lys Pro Phe Lys Thr Gly
            100
                                105
<210> 2547
<211> 556
<212> DNA
<213> Homo sapiens
<400> 2547
acgegtgeae acacacaca geaggegtae acgeteacaa gtgeacacae acatatgagt
tteccacaca teteaceata teaetttete tttaettttt aaagacaggg caettgeeet
tatggccaat aatattatgc ccaagctaca acattccgag tcaatcacaa aggttataaa
cttcatttga actgaagacc acctgtaagc acgcagctca aatgttctca cctagaaatt
caagttgtgt ttggaaagtg gacttaacgg tcaaagaaaa aggcctggcc aacttcagag
agggacácco agcootgota ogttgogtgt cattatgtgg tgotgtgota tocatagaga
aagaggagat gaaaaagatt ctacaaagag agatcaaact gcaagaaagc acaaagattt
catcaccaca atatgaagge eteettggta taaatgaett ttttaggtee caataagaaa
taccatctat totatotgga attattttat tagottcaaa ttttattota agattcatac
tatcagatca tctaga
556
<210> 2548
<211> 106
<212> PRT
<213> Homo sapiens
<400> 2548
Met Asn Leu Arg Ile Lys Phe Glu Ala Asn Lys Ile Ile Pro Asp Arg
Ile Asp Gly Ile Ser Tyr Trp Asp Leu Lys Lys Ser Phe Ile Pro Arg
Arg Pro Ser Tyr Cys Gly Asp Glu Ile Phe Val Leu Ser Cys Ser Leu
Ile Ser Leu Cys Arg Ile Phe Phe Ile Ser Ser Phe Ser Met Asp Ser
Thr Ala Pro His Asn Asp Thr Gln Arg Ser Arg Ala Gly Cys Pro Ser
                                         75
                    70
Leu Lys Leu Ala Arg Pro Phe Ser Leu Thr Val Lys Ser Thr Phe Gln
                                                         95
                                     90
Thr Gln Leu Glu Phe Leu Gly Glu Asn Ile
                                 105
            100
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<210> 2549
  <211> 435
  <212> DNA
  <213> Homo sapiens
 <400> 2549
 nnccagecte teteegaceg egtacgtatt gaatttgata aagaagecaa caeggttgtt
 atcgatgata atggtgtcgg catgtctcgt gaagaagcca ttacaaactt aggtacgatt
 gctaaatcgg gcacctcttc tttcttagag caattgagtg gcgatcagaa aaaagacagc
 caacttattg gtcaattcgg tgtaggcttt tactctgctt tcatcgttgc tgataaagta
 acagtagaaa cacgtcgcgc aggtgcgacg gaaaatgaag cggttcgctg ggtatctgat
 ggttctggtg aatttactat tgagacgatc gataaagcga ctcgtggtac acgcattact
 ttgcatctga aagcagatga aaaagatttc gcagacaact tccgtctacg ttcattagta
 acaaaatatt ctgat
 435
 <210> 2550
 <211> 145
 <212> PRT
 <213> Homo sapiens
 <400> 2550
Xaa Gln Pro Leu Ser Asp Arg Val Arg Ile Glu Phe Asp Lys Glu Ala
 1
                 5
Asn Thr Val Val Ile Asp Asp Asn Gly Val Gly Met Ser Arg Glu Glu
Ala Ile Thr Asn Leu Gly Thr Ile Ala Lys Ser Gly Thr Ser Ser Phe
Leu Glu Gln Leu Ser Gly Asp Gln Lys Lys Asp Ser Gln Leu Ile Gly
Gln Phe Gly Val Gly Phe Tyr Ser Ala Phe Ile Val Ala Asp Lys Val
Thr Val Glu Thr Arg Arg Ala Gly Ala Thr Glu Asn Glu Ala Val Arg
                85
                                    90
Trp Val Ser Asp Gly Ser Gly Glu Phe Thr Ile Glu Thr Ile Asp Lys
                                105
Ala Thr Arg Gly Thr Arg Ile Thr Leu His Leu Lys Ala Asp Glu Lys
                            120
                                                125
Asp Phe Ala Asp Asn Phe Arg Leu Arg Ser Leu Val Thr Lys Tyr Ser
    130
                        135
Asp
145
<210> 2551
<211> 403
<212> DNA
<213> Homo sapiens
```

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<400> 2551
nngeeggeea geeteacate agteteteeg eeceggggaa ggeteageae tttaaatega
ggactecact tetggggacg cetggttegt tegeceacea ggeetagget aegetecatg
ctecceage aatetetgte tacacetect geggegeett geceteetee gacecettte
cagccannaa gtccccccac cccttcagag aagcagcctc aaattccaga agtggaggct
ccagectece egegaggtae cageceaca gtettetggg agecattgtg gecagggaeg
300
geetetggae tgecaggetg ggttggggae cagggaacat eggtetaete aggtgtgagg
gggcaggtct ggcctgcccc aaagttggct ccatcctgga can
403
<210> 2552
<211> 134
<212> PRT
<213> Homo sapiens
<400> 2552
Xaa Pro Ala Ser Leu Thr Ser Val Ser Pro Pro Arg Gly Arg Leu Ser
                                    10
Thr Leu Asn Arg Gly Leu His Phe Trp Gly Arg Leu Val Arg Ser Pro
Thr Arg Pro Arg Leu Arg Ser Met Leu Pro Gln Gln Ser Leu Ser Thr
Pro Pro Ala Ala Pro Cys Pro Pro Pro Thr Pro Phe Gln Pro Xaa Ser
                                             60
Pro Pro Thr Pro Ser Glu Lys Gln Pro Gln Ile Pro Glu Val Glu Ala
                    70
65
Pro Ala Ser Pro Arg Gly Thr Ser Pro Thr Val Phe Trp Glu Pro Leu
                                    90
                85
Trp Pro Gly Thr Ala Ser Gly Leu Pro Gly Trp Val Gly Asp Gln Gly
                                105
Thr Ser Val Tyr Ser Gly Val Arg Gly Gln Val Trp Pro Ala Pro Lys
                            120
Leu Ala Pro Ser Trp Thr
    130
<210> 2553
<211> 380
<212> DNA
<213> Homo sapiens
<400> 2553
actagtgtcc ctataagaaa aggaaaggac caagacacag gaaagatgaa gcagagattg
gagagataca gcatgggcca aggagcactg ggagccagca gcagctggaa gaggcaggag
gcatcctccc tagaccgcac aggatgctac tgggtgagcc tgctgtcctg gaaaaggcgt
180
```

```
gaagtctgcc tgagtgggca ggggcttctg cgcagcaccc agcaaggcca aggtggaagg
 240
 gacceteetg geocetgtee tggeteeace eteagetget ggeaggtggg teaceaggee
 300
 tetgeecaaa gaaacteetg caggeagete tggacceet gtettacaca cetteteact
 gagcctgcca gcatcccagn
 380
 <210> 2554
 <211> 111
 <212> PRT
<213> Homo sapiens
<400> 2554
Met Lys Gln Arg Leu Glu Arg Tyr Ser Met Gly Gln Gly Ala Leu Gly
 1
Ala Ser Ser Ser Trp Lys Arg Gln Glu Ala Ser Ser Leu Asp Arg Thr
                                 25
Gly Cys Tyr Trp Val Ser Leu Leu Ser Trp Lys Arg Arg Glu Val Cys
                             40
Leu Ser Gly Gln Gly Leu Leu Arg Ser Thr Gln Gln Gly Gly Gly
                        55
Arg Asp Pro Pro Gly Pro Cys Pro Gly Ser Thr Leu Ser Cys Trp Gln
Val Gly His Gln Ala Ser Ala Gln Arg Asn Ser Cys Arg Gln Leu Trp
                                    90
Thr Pro Cys Leu Thr His Leu Leu Thr Glu Pro Ala Ser Ile Pro
            100
                                105
<210> 2555
<211> 368
<212> DNA
<213> Homo sapiens
<400> 2555
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atgttgttaa tgctgcccgg tagttcggtg gcattcttca tgggcaatag tttaatggga
gataacgcga ataatggtag tgtcgttcta gtgctcacag acctggtcac ccaaatagaa
ggatttatat cotcocatat cotcattttt gtgctcgttg gcctcggcat tgtctttacc
gttgccactc gaggtgtaca gttccgcctc ttcgggcaca tgtggcacct catgctcgat
tcacggaage aaaagggcac ctccctctcc agetctcaag cattcacagt gggtctcgat
360
cacgcggn
368
<210> 2556
<211> 102
<212> PRT
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<213> Homo sapiens <400> 2556 Met Leu Leu Met Leu Pro Gly Ser Ser Val Ala Phe Phe Met Gly Asn 10 Ser Leu Met Gly Asp Asn Ala Asn Asn Gly Ser Val Val Leu Val Leu Thr Asp Leu Val Thr Gln Ile Glu Gly Phe Ile Ser Ser His Ile Leu Ile Phe Val Leu Val Gly Leu Gly Ile Val Phe Thr Val Ala Thr Arg 55 Gly Val Gln Phe Arg Leu Phe Gly His Met Trp His Leu Met Leu Asp 75 Ser Arg Lys Gln Lys Gly Thr Ser Leu Ser Ser Ser Gln Ala Phe Thr 90 Val Gly Leu Asp His Ala 100 <210> 2557 <211> 408 <212> DNA <213> Homo sapiens <400> 2557 atcactactc cagttggtga ggcagttctg ggtcgcatct taaatgtgat cggtgagccg attgatgaga tgggcccagt taacgcgaaa gaaaaatggg aaattcaccg tccagctcct 120 aaattcgaag accaagctgt taaagctgag atgttgatga ctggtattaa ggtcgttgat cttcttgcac cttacgcaaa gggtggcaag atcggtctct tcggtggtgc gggcgtaggt aaaacagttt tgattcaaga gttgattcgt aacatcgcta ctgagcacgg tggatactct gtattcgcag gtgtcggcga gcgtactcgc gaaggtaacg atctttgggt tgagatgaaa gaatcaggcg ttatcgcaaa gaccgcactt gtattcggtc agatgaat 408 <210> 2558 <211> 136 <212> PRT <213> Homo sapiens <400> 2558 Ile Thr Thr Pro Val Gly Glu Ala Val Leu Gly Arg Ile Leu Asn Val Ile Gly Glu Pro Ile Asp Glu Met Gly Pro Val Asn Ala Lys Glu Lys Trp Glu Ile His Arg Pro Ala Pro Lys Phe Glu Asp Gln Ala Val Lys Ala Glu Met Leu Met Thr Gly Ile Lys Val Val Asp Leu Leu Ala Pro

Tyr Ala Lys Gly Gly Lys Ile Gly Leu Phe Gly Gly Ala Gly Val Gly

```
65
                    70
Lys Thr Val Leu Ile Gln Glu Leu Ile Arg Asn Ile Ala Thr Glu His
Gly Gly Tyr Ser Val Phe Ala Gly Val Gly Glu Arg Thr Arg Glu Gly
            100
                                105
Asn Asp Leu Trp Val Glu Met Lys Glu Ser Gly Val Ile Ala Lys Thr
                            120
Ala Leu Val Phe Gly Gln Met Asn
    130
<210> 2559
<211> 389
<212> DNA
<213> Homo sapiens
<400> 2559
tccttgaaga tgaacatctt tcggctgcaa actgaaaagg atttgaatcc tcagaaaaca
gcttttctga aagatcgact gaatgcaata caggaagagc attctaagga cctgaagctg
ttgcatctcg aagttatgaa tttgcgccag caactgagag ctgtaaaaga ggaagaagac
aaggcacaag atgaggtgca aaggttgact gccactctga agattgcctc gcagacaaag
aagaatgcag ccattattga agaggaactg aagaccacaa aacgtaaaat gaaccttaaa
attcaagagc ttctagagat gacctcattt ccaagttggt tgaagaaaat aagaacctgc
aggatatett teaacaggaa catgaagaa
<210> 2560
<211> 129
<212> PRT
<213> Homo sapiens
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Ser Leu Lys Met Asn Ile Phe Arg Leu Gln Thr Glu Lys Asp Leu Asn
                                    10
Pro Gln Lys Thr Ala Phe Leu Lys Asp Arg Leu Asn Ala Ile Gln Glu
                                25
Glu His Ser Lys Asp Leu Lys Leu Leu His Leu Glu Val Met Asn Leu
Arg Gln Gln Leu Arg Ala Val Lys Glu Glu Glu Asp Lys Ala Gln Asp
Glu Val Gln Arg Leu Thr Ala Thr Leu Lys Ile Ala Ser Gln Thr Lys
                                        75
Lys Asn Ala Ala Ile Ile Glu Glu Leu Lys Thr Thr Lys Arg Lys
                                    90
Met Asn Leu Lys Ile Gln Glu Leu Leu Glu Met Thr Ser Phe Pro Ser
                               105
Trp Leu Lys Lys Ile Arg Thr Cys Arg Ile Ser Phe Asn Arg Asn Met
       115
                            120
                                                125
Lys
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<210> 2561
<211> 429
<212> DNA
<213> Homo sapiens
<400> 2561
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atgtggagcc atttgaacag gctcctcttc tggagcatat tttcttctgt cacttgtaga
aaagetgtat tggattgtga ggcaatgaaa acaaatgaat teeettetee atgtttggae
tcaaagacta aggtggttat gaagggtcaa aatgtatcta tgttttgttc ccataagaac
aaatcactgc agatcaccta ttcattgttt cgacgtaaga cacacctggg aacccaggat
ggaaaaggtg aacctgegat ttttaaccta agcatcacag aagcccatga atcaggcccc
tacaaatgca aagcccaagt taccagctgt tcaaaataca gtcgtgactt cagcttcacg
420
attgtcgac
429
<210> 2562
<211> 143
<212> PRT
<213> Homo sapiens
<400> 2562
Xaa Leu Thr Thr Val Val Leu Leu Cys Leu Leu Thr Pro Ser Trp Thr
                                    10
Ser Thr Gly Arg Met Trp Ser His Leu Asn Arg Leu Leu Phe Trp Ser
            20
Ile Phe Ser Ser Val Thr Cys Arg Lys Ala Val Leu Asp Cys Glu Ala
Met Lys Thr Asn Glu Phe Pro Ser Pro Cys Leu Asp Ser Lys Thr Lys
Val Val Met Lys Gly Gln Asn Val Ser Met Phe Cys Ser His Lys Asn
                    70
Lys Ser Leu Gln Ile Thr Tyr Ser Leu Phe Arg Arg Lys Thr His Leu
                                    90
Gly Thr Gln Asp Gly Lys Gly Glu Pro Ala Ile Phe Asn Leu Ser Ile
                                                     110
                                 105
            100
Thr Glu Ala His Glu Ser Gly Pro Tyr Lys Cys Lys Ala Gln Val Thr
                                                 125
                            120
Ser Cys Ser Lys Tyr Ser Arg Asp Phe Ser Phe Thr Ile Val Asp
                                             140
                        135
    130
<210> 2563
<211> 267
<212> DNA
<213> Homo sapiens
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<400> 2563
 ggateceaga egagtgetgg cageagtatg ggggeegtgg gggegaegge caeegteage
accoeggica ccatecagaa catgacetee tettatgica ecateacate ecatgicett
aaggeettta eeetttggga acaggeagag geeetcacaa ggaagaacaa agaattettt
getcagetca geacaaaagt gegegtgttg gecetcaaca geageetggt ggaeetggtg
cactacacaa ggcagggcct ccagcgg
267
<210> 2564
<211> 89
<212> PRT
<213> Homo sapiens
<400> 2564
Gly Ser Gln Thr Ser Ala Gly Ser Ser Met Gly Ala Val Gly Ala Thr
Ala Thr Val Ser Thr Pro Val Thr Ile Gln Asn Met Thr Ser Ser Tyr
Val Thr Ile Thr Ser His Val Leu Lys Ala Phe Thr Leu Trp Glu Gln
                            40
Ala Glu Ala Leu Thr Arg Lys Asn Lys Glu Phe Phe Ala Gln Leu Ser
                        55
Thr Lys Val Arg Val Leu Ala Leu Asn Ser Ser Leu Val Asp Leu Val
                                         75
His Tyr Thr Arg Gln Gly Leu Gln Arg
                85
<210> 2565
<211> 333
<212> DNA
<213> Homo sapiens
<400> 2565
cttcgcactg ctccgcgagt tcttggggga gtgagcacag cgcgtaagct cagccacgtg
tggttcgaat tcgattcctt ggtcaatgcc cgtgacgtgg gcggaatccc cacccccgat
gggccggtga aatcccagcg actgatecge agcgacaacc tgcaggccct caccgaggcc
gacategece agttgeagea acteggtgte teegatgtgg tegatetgeg ttecacetat
240
gaggtggcca gcgagggccc ggggccgctg accgggcgtg gggtgaccat ccaccccat
teetteetge eegaceagea egecaatgtg cae
333
<210> 2566
<211> 111
<212> PRT
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<213> Homo sapiens

<210> 2567 <211> 396 <212> DNA

<213> Homo sapiens

<400> 2567

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agccagttca cagatcaacg tctattcgga accgatcaat ttagtattgg tgggcgctat 120

tctgtacgag gttttagtgg agaagaaacc ttaagaggtg actcgggcta ttatgtacaa 180

aatgaatggg cattaccatt tagaaaacaa caaattactc catatgtagg gatagatatt 240

ggacatgtat gggggccatc tacagaaact caattaggta ataccttaat tggtggtgta

gttggtgtac gtggtatggt tggtgacgat gtaaactatg atgtatcact aggaacacca

attaagaaac cagaaggttt tgatacagat acgcgt 396

<210> 2568

<211> 132

<212> PRT

<213> Homo sapiens

<400> 2568

Xaa Ile Gln Thr Gly Val Arg Met Gly His Lys Gln Gly Thr Tyr Thr

1 5 10 15

Met Arg Phe Arg Ser Gln Phe Thr Asp Gln Arg Leu Phe Gly Thr Asp 20 25 30

Gln Phe Ser Ile Gly Gly Arg Tyr Ser Val Arg Gly Phe Ser Gly Glu 35 40 45 Glu Thr Leu Arg Gly Asp Ser Gly Tyr Tyr Val Gln Asn Glu Trp Ala

50 55 60 Leu Pro Phe Arg Lys Gln Gln Ile Thr Pro Tyr Val Gly Ile Asp Ile

```
Gly His Val Trp Gly Pro Ser Thr Glu Thr Gln Leu Gly Asn Thr Leu
 Ile Gly Gly Val Val Gly Val Arg Gly Met Val Gly Asp Asp Val Asn
             100
                                 105
 Tyr Asp Val Ser Leu Gly Thr Pro Ile Lys Lys Pro Glu Gly Phe Asp
         115
                             120
 Thr Asp Thr Arg
     130
 <210> 2569
 <211> 330
 <212> DNA
 <213> Homo sapiens
 <400> 2569
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 tacctcgtcg ccgatagagt tgtcgtgacc accaagcaca acgatgacga gcagtacgtg
 tgggagtccc aagcgggcgg gtcgttcact gttactcgtg acacgtcagg ggagcagctt
 180
ggcaggggca ctaagatcac actgttcctc aaggacgatc agctggagta ccttgaggag
cgtcgcctca aggatctggt caagaagcac tctgagttca tcagctaccc catctccctg
tggactgaaa agacaacaga gaaggaaatt
330
<210> 2570
<211> 110
<212> PRT
<213> Homo sapiens
<400> 2570
Leu Ala Ala Gly Ala Asp Val Ser Met Ile Gly Gln Phe Gly Val Gly
 1
Phe Tyr Ser Ala Tyr Leu Val Ala Asp Arg Val Val Thr Thr Lys
                                25
His Asn Asp Asp Glu Gln Tyr Val Trp Glu Ser Gln Ala Gly Gly Ser
Phe Thr Val Thr Arg Asp Thr Ser Gly Glu Gln Leu Gly Arg Gly Thr
                        55
Lys Ile Thr Leu Phe Leu Lys Asp Gln Leu Glu Tyr Leu Glu Glu
                    70
                                       . 75
Arg Arg Leu Lys Asp Leu Val Lys Lys His Ser Glu Phe Ile Ser Tyr
                                    90
Pro Ile Ser Leu Trp Thr Glu Lys Thr Thr Glu Lys Glu Ile
            100
                                105
<210> 2571
<211> 335
<212> DNA
<213> Homo sapiens
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<400> 2571
gaattegeca atgitticte eggiatggge tecacagiaa eccitategg eegeteeeet
gtgctcctta aacatctcga taatgaacta tctgagctct ttactgagat cgctcgggag
120
aaatgggatg teegtttagg geagggaaeg acagetateg accaggtgga gaageagegt
gaagatgggt cttcctactt cgaaaccacc attacatttg aagacggcag cactgttacc
ggtgacgcat tectagttge taceggacgt acceptaaca cegacegeet tggeetegae
aatggttccg gtgtgaaggt tgaaagggga cgcgt
335
<210> 2572
<211> 111
<212> PRT
<213> Homo sapiens
<400> 2572
Glu Phe Ala Asn Val Phe Ser Gly Met Gly Ser Thr Val Thr Leu Ile
 1
Gly Arg Ser Pro Val Leu Leu Lys His Leu Asp Asn Glu Leu Ser Glu
Leu Phe Thr Glu Ile Ala Arg Glu Lys Trp Asp Val Arg Leu Gly Gln
Gly Thr Thr Ala Ile Asp Gln Val Glu Lys Gln Arg Glu Asp Gly Ser
                        55
Ser Tyr Phe Glu Thr Thr Ile Thr Phe Glu Asp Gly Ser Thr Val Thr
                    70
                                        75
Gly Asp Ala Phe Leu Val Ala Thr Gly Arg Thr Pro Asn Thr Asp Arg
                85
Leu Gly Leu Asp Asn Gly Ser Gly Val Lys Val Glu Arg Gly Arg
                                105
            100
<210> 2573
<211> 460
<212> DNA
<213> Homo sapiens
<400> 2573
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geoggateca tacoggaceg tttogtcagg gtggtcggac atcgacgaca cogcagatge
cgagacgacg ttgatacgtc caccggcgcg gtccgtgatc cacgccgtcg tcgccgttgc
cgccactggc acgatgaggg ccatcaccga gaagagaacg gccaccactc gcagaccacc
tcgtcccaga agagcgagga cgaaggcgat gacggcgatg accagagccg gtacagccaa
cgatcccacc agaacggagg agatgaaggt gagggcattg tgtgagggga ggatcgcggc
360
```

```
cactgaccac gccagtaccg gcagggtcag gatcagcccg acgagaccgg aagtgatgcg
 tagccaggaa tgacgggagg ttttcgtgtc agccacgcgt
 460
 <210> 2574
 <211> 105
 <212> PRT
 <213> Homo sapiens
 <400> 2574
Met Gly Thr Val Asp Leu Gly Arg Leu Val Arg Ala Gly Ser Ile Pro
Asp Arg Phe Val Arg Val Val Gly His Arg Arg His Arg Arg Cys Arg
            20
                                 25
Asp Asp Val Asp Thr Ser Thr Gly Ala Val Arg Asp Pro Arg Arg
Arg Arg Cys Arg His Trp His Asp Glu Gly His His Arg Glu Glu Asn
Gly His His Ser Gln Thr Thr Ser Ser Gln Lys Ser Glu Asp Glu Gly
                                         75
Asp Asp Gly Asp Asp Gln Ser Arg Tyr Ser Gln Arg Ser His Gln Asn
                85
Gly Gly Asp Glu Gly Glu Gly Ile Val
            100
<210> 2575
<211> 3954
<212> DNA
<213> Homo sapiens
<400> 2575
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ccactetege geeteegaac agecacaggg geaaageeet gteaeceeca ggateeggte
atcagggaaa gaggacaggg agaccagaag agggccagct gggacgaggg ggcggacgcc
caggaggcaa cttctgagac gcagctcctg agaggggcag ggaccaggcg cgggaggcca
gagggggcac agagaacaaa ccccctcaga agtgaagagg agagcggaag gaaccgagag
gggacggaca ggagctgagg aggaaagagg aggggagagg ggtcaggcca ggcagccaag
gagaagacgt gtggccgggg gctatcagaa ggaaactggg acggacgggc cgggctcggg
420
ctgtcctgtg gagcagcagc atccccgggg ccggcagagg cgccagtggc tgggcgggat
gagtetetga gggecaetgt ggagegeeee gecatggeee eeegcaeeet etggagetge
540
tacctetget geetgetgac ggeagetgea ggggeegeea getaccetee tegaggttte
agectetaca caggitecag tggggeeete ageceegggg ggeeecagge ecagattgee
660
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	ccagccgcca	caggaactgg	tgtgcctacg	tggtgacccg	gacagtgagc
720 tgtgtccttg 780	aggatggagt	ggagacatat	gtcaagtacc	agccttgtgc	ctggggccag
ccccagtgtc 840	cccaaagcat	catgtaccgc	cgcttcctcc	gccctcgcta	ccgtgtggcc
tacaagacag	tgaccgacat	ggagtggagg	tgctgtcagg	gttatggggg	cgatgactgt
gctgagagtc 960	ccgctccagc	gctggggcct	gcgtcttcca	caccacggcc	cctggcccgg
	ccaacctctc	tggctccagt	gcaggcagcc	ccctcagtgg	actgggggga
	gggagtcaga	gaaggtgcag	cagctggagg	aacaggtgca	gageetgace
	aaggcctgcg	gggcgtcctg	caaggactga	gcgggcgcct	ggcagaggat
	ctgtggagac	ggccttcaac	gggaggcagc	agccagctga	cgcggctgcc
cgccctgggg 1260		cctcaatgag			
1320		ggagctgggt			
1380		cccagcccca			
1440		gcggttgcag			
1500		gcaggaggac			
1560		gcaacggcac			
1620		agagctgggc			
1680		gacagtgctg			
1740		cccccaggc			
1800		caccctgggc			
1860		ccactggctg			
1920					gttggaggag
1980					tggggagcag
2040					cagtgagggg
2100					ggcccggcag
2160					ggatgcccag
2220					gctaggccaa
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Asn Thr Arg Ile Met Gln Asp Thr Glu Lys Asp Asp Asp Asn Asn Ser Asp Leu 195	GI	u	GIU	GIU	GIU		Gru	GIU	N311	GIU		****3	01				
180			~ \		71.		C1-	N ===	Wh	C1		N en) en	λen	Δςπ		Asp
Glu Tyr Asp Ass Tyr Asp Glu Leu Val Ala Lys Ser Leu Leu Ass Leu 195	AS	n	Thr	Arg		met	GIII	ASP	1111		Lys	ASP	wa b	7211			
195	-3					TT	3	<i>α</i> 1	t		71-	Tare	Car	T.611		Δsn	T.eu
Carrell	GI	u	Tyr		ASI	TYT	Asp	GIU		val	Ala	пуз	361		ביים		
Met	~1		•			C1	N	210		т	7 ~~	7 T =	Δτα		Glu	Ser	Glu
Met Asn Ser Asn Thr Ser Asn Ser Leu Asp Asp Asp Asp Leu Asp Asp <td>GI</td> <td>y</td> <td></td> <td>TIE</td> <td>AIA</td> <td>GIU</td> <td>wsb</td> <td></td> <td>ATG</td> <td>LYL</td> <td>A19</td> <td>7.4</td> <td></td> <td></td> <td></td> <td></td> <td></td>	GI	y		TIE	AIA	GIU	wsb		ATG	LYL	A19	7.4					
235	M -	_		C	700	The	c~~		Sar	T.au	Glu	Acn		Ser	Asp	Lvs	Asn
Val			ASII	261	VOII	1111		ASII	561	Deu	010					-1-	
Val Val Arg Glu Thr Val Asp Ser Leu Lys Leu Leu Ala Gln Gly His 260			A cm	T 011	Glv	Ara		Ser	Glu	Leu	Ser		Asp	Leu	Asp	Ser	
Val Val Arg Glu Thr Val Asp Ser Leu Leu Leu Ala Gln Gly His 260 265 270 270 Asp Ser 270 285 270 285 285 285 Asp Asp Asp Asp Asp Asp Ser 285 285 Asp Asp Asp Ser 285 285 Asp Asp Asp Ser 285 Asp Asp Asp Ser 285 Asp Asp Asp Asp Glu Asp Asp Asp Glu Asp Asp <td>GI</td> <td>u</td> <td>ASII</td> <td>Den</td> <td>Gry</td> <td></td> <td>Lys</td> <td>501</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td>	GI	u	ASII	Den	Gry		Lys	501									•
Gly Val Val Leu Ser Glu Asn Met Asn Asp Asp Asp Tyr Ala Asp Ser 275 Met Ser Gln Gln Asp Ser Arg Asn Met Asn Tyr Val Met Leu Gly Lys 290 Pro Met Asn Asn Gly Leu Met Glu Lys Met Val Glu Glu Ser Asp Glu 305 Glu Val Cys Leu Ser Ser Leu Glu Cys Leu Arg Asn Gln Cys Phe Asp 325 Leu Ala Arg Lys Leu Ser Glu His Val Arg Asn Pro Glu Glu Asp Pro Gln 360 Glu Asn Met Asn Ile Arg Gln His Val Arg Pro Glu Glu Asp Pro Gln 355 Gly Arg Thr Pro Asp Arg Ser Arg Asn Tyr Ser Asp Met Leu Asn Leu Met Arg 370 Leu Glu Glu Gln Leu Ser Pro Arg Ser Arg Val Phe Ala Ser Cys Ala 385 Leu Glu Glu Asp Gly Cys His Glu Arg Asp	V.a	1	V=3	Ara	Glu		Val	Asp	Ser	Leu		Leu	Leu	Ala	Gln	Gly	His
Met Val Val Leu Ser Glu Asn Met Asn Asp Asn Asp Asn Tyr Ala Asp Ser 285	٧a	-	Val	~ 9												•	
Met Ser Gln Gln Asp Ser Arg Asn Met Asn Try Val Met Leu Gly Lys 290 295 300 300 310 315 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320	GI	v	Val	Val		Ser	Glu	Asn	Met			Arq	Asn	Tyr	Ala	Asp	Ser
Met Ser Gln Asp Ser Arg Asn Met Asn Tyr Val Met Leu Gly Lys Met Val Glu Ser Asp Asp <td>-</td> <td>3</td> <td>,,,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td>•</td> <td></td> <td></td> <td></td> <td>_</td> <td></td>	-	3	,,,								•	•				_	
Pro Met Asn Asn Gly Leu Met Glu Lys Met Val Glu Glu Ser Asp Glu 305 315 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320 320	Me	t	Ser		Gln	Asp	Ser	Arq	Asn	Met	Asn	Tyr	Val	Met	Leu	Gly	Lys
Pro Met Asn Asn Gly Leu Met Glu Lys Met Val Glu Glu Ser Asp 320 Glu Val Cys Leu Ser Ser Ser Leu Glu Cys Leu Arg Asn Gln Cys Pro Asn Gln Cys Asn Arg Asn Gln Cys Asn Arg Asn Gln Cys Asn Arg Asn Gln Asn Asn Arg Asn Arg Asn Pro Gln Asn Pro Gln Asn Pro Gln Asn Pro Asn Pro Asn Arg Asn Arg Asn Pro Asn Arg Asn Arg Asn Pro Arg Asn Arg Asn Leu Asn Asn Arg Asn Arg Asn Arg Asn Arg Asn Arg Asn		_				•											
305 Ser Ser Ser Leu Glu Cys Leu Arg Asn Gln Cys Phe Asp 325 Ser Ser Leu Glu Thr Asn Pro Gln Glu Arg Asn Pro Gln Glu Arg Asn Pro Gln Arg Arg Asn Pro Gln Arg	Pr	0		Asn	Asn	Gly	Leu	Met	Glu	Lys	Met	Val	Glu	Glu	Ser	Asp	Glu
Secondary Seco	30	5					310					315					320
Secondary Seco	Gl	u	Val	Cys	Leu	Ser	Ser	Leu	Glu	Cys	Leu	Arg	Asn	Gln	Cys	Phe	Asp
Gln Asn Met Asn Ile Arg Gln His Val Arg Pro Glu Glu Asp Phe Pro 355																	_
Gln Asn Met Asn Ile Arg Gln His Val Arg Pro Glu Glu Asp Phe Pro 355	Le	u	Ala	Arg	Lys	Leu	Ser	Glu	Thr	Asn	Pro	Gln	Glu	Arg		Pro	Gln
Gly Arg Thr Pro Asp Arg Asn Tyr Ser Asp Met Leu Asn Leu Met Arg 370								_				_				-	5
Gly Arg Thr Pro Asp Arg Asn Tyr Ser Asp Met Leu Asn Leu Met Arg 370	Gl	n	Asn		Asn	Ile	Arg	Gln		Val	Arg	Pro	Glu		Asp	Pue	Pro
Leu Glu Glu Gln Leu Ser Pro Arg Ser Arg Val Phe Ala Ser Cys Ala 385	_				_	_	_	_		_			•		T	Mon	N w.e.
Leu Glu Glu Gln Leu Ser Pro Arg Ser Arg Val Phe Ala Ser Cys Ala 385	Gl	Y		Thr	Pro	Asp	Arg		Tyr	ser	Asp	met		ASI	Leu	Met	ALG
385	_					_	_		•		3	17-3		71-	C0~	Cvc	בות
Lys Glu Asp Gly Cys His Glu Arg Asp Asp Asp Thr Thr Ser Val Asn 405			GIU	GIU	GIN	Leu		PIO	Arg	Ser	Arg		FIIC	AIA	JCI	Cys	
Ser Asp Arg Ser Glu Glu Val Phe Asp Met Thr Lys Gly Asn Leu Thr 420			~1	>	61	C		C1	N	7	N cm		Thr	Thr	Ser	Val	
Ser Asp Arg Ser Glu Glu Val Phe Asp Met Thr Lys Gly Asn Leu Thr 420 425 430 Leu Leu Glu Lys Ala Ile Ala Leu Glu Thr Glu Arg Ala Lys Ala Met 435 440 425 445 Arg Glu Lys Met Ala Met Glu Ala Gly Arg Arg Arg Asp Asn Met Arg Ser 450 455 460 460 Tyr Glu Asp Gln Ser Pro Arg Gln Leu Pro Gly Glu Asp Arg Lys Pro 465 470 475 480 Lys Ser Ser Asp Ser His Val Lys Lys Pro Tyr Tyr Gly Lys Asp Pro 485 490 495 Ser Arg Thr Glu Lys Lys Glu Ser Lys Cys Pro Thr Pro Gly Cys Asp 505 510 Gly Thr Gly His Val Thr Gly Leu Tyr Pro His His Arg Ser Leu Ser 515 525 Gly Cys Pro His Lys Asp Arg Val Pro Pro Glu Ile Leu Ala Met His 530 535	гу	5	GIU	Asp	GIA		nis	GIU	AIG	ASP		ASP	1111	1111	502		
Leu Leu Glu Lys Ala Ile Ala Leu Glu Thr Glu Arg Ala Lys Ala Met 435 Arg Glu Lys Met Ala Met Glu Ala Gly Arg Arg Asp Asn Met Arg Ser 450 Tyr Glu Asp Gln Ser Pro Arg Gln Leu Pro Gly Glu Asp Arg Lys Pro 465 Lys Ser Ser Asp Ser His Val Lys Lys Pro Tyr Tyr Gly Lys Asp Pro 485 Ser Arg Thr Glu Lys Lys Glu Ser Lys Cys Pro Thr Pro Gly Cys Asp 500 Gly Thr Gly His Val Thr Gly Leu Tyr Pro His His Arg Ser Leu Ser 515 Gly Cys Pro His Lys Asp Arg Val Pro Pro Glu Ile Leu Ala Met His 530	50	_) en) ra	Sar		Glu	Val	Dhe	Asn		Thr	Lvs	Glv	Asn		Thr
Leu Leu Glu Lys Ala Ile Ala Leu Glu Thr Glu Arg Ala Lys Ala Met	50	_	rsp	~-3		014	014	•					-1-	•			
Arg Glu Lys Met Ala Met Glu Ala Gly Arg Arg Asp Asn Met Arg Ser 450	ī.e	13	Leu	Glu		Ala	Ile	Ala	Leu		Thr	Glu	Arg	Ala	Lys	Ala	Met
Arg Glu Lys Met Ala Met Glu Ala Gly Arg Arg Asp Asn Met Arg Ser 450		_			-,-								_				
450	Ar	a	Glu	Lys	Met	Ala	Met	Glu	Ala	Gly	Arg	Arg	Asp	Asn	Met	Arg	Ser
465		_		•						_	_						
465	Ту	r	Glu	Asp	Gln	Ser	Pro	Arg	Gln	Leu	Pro	Gly	Glu	Asp	Arg	Lys	Pro
Ser Arg Thr Glu Lys Lys Glu Ser Lys Cys Pro Thr Pro Gly Cys Asp 500	_			_							•						
Ser Arg Thr Glu Lys Lys Glu Ser Lys Cys Pro Thr Pro Gly Cys Asp 500	Ly	's	Ser	Ser	Asp	Ser	His	Val	Lys	Lys	Pro	Tyr	Tyr	Gly	Lys	Asp	Pro
Gly Thr Gly His Val Thr Gly Leu Tyr Pro His His Arg Ser Leu Ser 515 520 525 Gly Cys Pro His Lys Asp Arg Val Pro Pro Glu Ile Leu Ala Met His 530 535 540						485					490		•			495	
Gly Thr Gly His Val Thr Gly Leu Tyr Pro His His Arg Ser Leu Ser 515 520 525 Gly Cys Pro His Lys Asp Arg Val Pro Pro Glu Ile Leu Ala Met His 530 535 540	Se	r	Arg	Thr	Glu	Lys	Lys	Glu	Ser	Lys	Cys	Pro	Thr	Pro	Gly	Cys	Asp
515 520 525 Gly Cys Pro His Lys Asp Arg Val Pro Pro Glu Ile Leu Ala Met His 530 535 540					500					505					510		
515 520 525 Gly Cys Pro His Lys Asp Arg Val Pro Pro Glu Ile Leu Ala Met His 530 535 540	Gl	Y	Thr	Gly	His	Val	Thr	Gly	Leu	Tyr	Pro	His	His	Arg	Ser	Leu	Ser
530 535 540																	•
	Gl	У	Cys	Pro	His	Lys	Asp	Arg	Val	Pro	Pro	Glu		Leu	Ala	Met	His
Glu Ser Val Leu Lys Cys Pro Thr Pro Gly Cys Thr Gly Arg Gly His																	•
	Gl	u	Ser	Val	Leu	Lys	Cys	Pro	Thr	Pro	Gly	Cys	Thr	Gly	Arg	Gly	His

545	5				550)				555	,				560
Val	. Asr	Sei	Asn	Arg	, Asn	Ser	His	Arg	Ser	Lev	Ser	Gly	Cys	Pro	Ile
				565				_	570			•	-	575	
Ala	Ala	Δ1=	Glu	Lve	: T.e.11	Δla	Lve	. 1 Δ			Tave	Wie	Gln		Cys
			580				,	585		. 010	, -	*****			CyD
B	17-3					1				_		_	590		
Asp	vai			Ser	Ser	GID			Asp	Arg	Val		_	Pro	Met
		595					600					605			
Cys	Phe	Val	. Lys	Gln	Leu	Glu	Ile	Pro	Gln	Tyr	Gly	Tyr	Arg	Asn	Asn
	610					615					620				
Val	Pro	Thr	Thr	Thr	Pro	Ara	Ser	Asn	Len	Δla	T.VS	Glu	T.eu	Glu	Lys
625					630				200	635		014		014	640
		1 200	Th-	C			Th	١	~			•	***	m\	
LYL	261	Lys	1111			GIU	Tyr	ASI			Asp	ASI	HIS		Tyr
				645					650					655	
Gly	Lys	Arg	Ala	Ile	Ala	Pro	Lys	Val	Gln	Thr	Arg	Asp	Ile	Ser	Pro
			660					665				•	670		
Lys	Gly	Tyr	Asp	Asp	Ala	Lys	Arq	Tyr	Cvs	Lys	Asp	Pro	Ser	Pro	Ser
•	_	675		•		•	680	- 4 -	- 2 -		•	685			
Ser	Ser	Ser	Thr	Ser	Ser	Tier		Pro	50=	5A~	SAT) cn	Tan	805
	690				261	695	AIG	FIU	261	Ser		261	WOII	Leu	261
C			61		•		_	_		_	700	_	_	_	
		GIY	GIA	Ser	Ser	Ala	Ser	Ser	Thr		Ser	Lys	Ser	Ser	
705					710					715					720
Asp	Tyr	Thr	His	Asp	Met	Glu	Ala	Ala	His	Met	Ala	Ala	Thr	Ala	Ile
				725					730					735	
Leu	Asn	Leu	Ser	Thr	Arg	Cys	Arg	Glu	Met	Pro	Gln	Asn	Leu	Ser	Thr
			740		•	•	•	745					750		
Lvs	Pro	Gln	Asp	I.en	Cys	Δla	Thr) cn	Pro	λεπ	Mot		T/a l	7.55
-1-		755			-,-		760	~~9	ASII	110	rsp.	765	GIG	VOI	ASP
Glu	λοπ		Th~	T 011	7	T		14	3	T	61 -		D	•	
GIU		GLY	1112	rea	Asp		ser	met	Asn	rys		Arg	Pro	Arg	Asp
	770	_		_		775					780				
	Cys	Cys	Pro	Ile	Leu	Thr	Pro	Leu	Glu	Pro	Met	Ser	Pro	Gln	Gln
785					790					795					800
Gln	Ala	Val	Met	Asn	Asn	Arg	Cys	Phe	Gln	Leu	Gly	Glu	Gly	Asp	Cys
				805			-		810		-		-	815	•
Trp	Asp	Leu	Pro	Val	Asp	Tvr	Thr	Lvs		Lve	Pro	Ara	Ara		Acn
•			820			- 7		825		-,-		**** 9	830		ngp
G1.,	7.00	C1		T	N	~1 ~	mh	_	~ 3	•	•				
GIU	ASP		ser	ьys	Asp	TIE		Pro	GIU	Asp	Leu		Pro	Phe	GIn
	_ •	835					840					845			
Glu		Leu	Glu	Glu	Arg	Arg	Tyr	Pro	Gly	Glu	Val	Thr	Ile	Pro	Ser
	850					855					860				
Pro	Lys	Pro	Lys	Tyr	Pro	Gln	Cys	Lys	Glu	Ser	Lys	Lys	Asp	Leu	Ile
865					870					875		Ī	_		880
Thr	Leu	Ser	Glv	Cvs	Pro	Leu	Ala	ASD	Lve		Tle	Δτα	Ser	Mot	
			1	885					890	001		9	-	895	Deu
- ומ	Th-	co-	60.		C1	T	T	~		mb	5	~ 3	-		
Ala	1111	Ser		GIN	Glu	Leu	rys		Pro	Thr	Pro	GIA		Asp	GIY
			900				•	905					910		
Ser	Gly	His	Ile	Thr	Gly	Asn	Tyr	Ala	Ser	His	Arg	Ser	Leu	Ser	Gly
		915					920					925			•
Cys	Pro	Arq	Ala	Lvs	Lvs	Ser	Glv	Ile	Ara	Tle	Δla	Gln	Ser	T.VS	Glu -
•	930	-		-	• -	935	1		3		940			-, -	
Acn		G1.,	Δοπ	G1 =	G1		т1 -	A	C	De-		D	~ 1	O	
	-y 3	JIU	vəħ	GIII	Glu	5T.Ô	TTE	AI.G	cys		val	PIO	GIA	cys	
945	-1				950					955					960
GIA	GID	GIY	His	ITe	Thr	Gly	Lys	Tyr	Ala	Ser	His	Arg	Ser	Ala	Ser
				965					970					975	
Gly	Cys	Pro	Leu	Ala	Ala	Lys	Arg	Gln	Lys	Asp	Gly	Tyr	Leu	Asn	Gly
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985
            980
Ser Gln Phe Ser Trp Lys Ser Val Lys Thr Glu Gly Met Ser Cys Pro
                            1000
                                                1005
    995
Thr Pro Gly Cys Asp Gly Ser Gly His Val Ser Gly Ser Phe Leu Thr
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                       1015
His Arg Ser Leu Ser Gly Cys Pro Arg Ala Thr Ser Ala Met Lys Lys
                                        1035
                   1030
Ala Lys Leu Ser Gly Glu Gln Met Leu Thr Ile Lys Gln Arg Ala Ser
                                   1050
               1045
Asn Gly Ile Glu Asn Asp Glu Glu Ile Lys Gln Leu Asp Glu Glu Ile
                               1065
           1060
Lys Glu Leu Asn Glu Ser Asn Ser Gln Met Glu Ala Asp Met Ile Lys
                                                1085
                           1080
Leu Arg Thr Gln Ile Thr Thr Met Glu Ser Asn Leu Lys Thr Ile Glu
                       1095
Glu Glu Asn Lys Val Ile Glu Gln Gln Asn Glu Ser Leu Leu His Glu
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                                        1115
Leu Ala Asn Leu Ser Gln Ser Leu Ile His Ser Leu Ala Asn Ile Gln
                                    1130
               1125
Leu Pro His Met Asp Pro Ile Asn Glu Gln Asn Phe Asp Ala Tyr Val
                                1145
                                                    1150
Thr Thr Leu Thr Glu Met Tyr Thr Asn Gln Asp Arg Tyr Gln Ser Pro
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                                                1165
Glu Asn Lys Ala Leu Leu Glu Asn Ile Lys Gln Ala Val Arg Gly Ile
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Gln Val
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ccaagagccc agggatcgcc tcgctgacag accccaaaac acgggccacg ccaccccgtc
120
ctctaggtac ctgtgccccc agtctcaagc atcactccgt gtctccctca catgccttct
gggcctctag ccctcaaaga gctaaagtat gtgagcactt tctcagccct ttaaacggat
taagtcatgt catcctcaca aggetgetgt gttttattac ctctgtttca ggtgcaagtc
atccccggga ggagtggtgg ggatgccgcc tgaccctggg ccacctggct gcagcatctg
tgttgatgac caccetectg ceteaggett tgeteetgaa tgttettget etetaggtet
qtccqctcct ggccctgctc ttcttaactc cgttcaagcc ccctgggtca cacgtccatg
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542
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Lys Thr Arg Ala Thr Pro Pro Arg Pro Leu Gly Thr Cys Ala Pro Ser
Leu Lys His His Ser Val Ser Pro Ser His Ala Phe Trp Ala Ser Ser
                             40
Pro Gln Arg Ala Lys Val Cys Glu His Phe Leu Ser Pro Leu Asn Gly
                        55
Leu Ser His Val Ile Leu Thr Arg Leu Leu Cys Phe Ile Thr Ser Val
Ser Gly Ala Ser His Pro Arg Glu Glu Trp Trp Gly Cys Arg Leu Thr
                                     90
Leu Gly His Leu Ala Ala Ser Val Leu Met Thr Thr Leu Leu Pro
                                105
Gln Ala Leu Leu Leu Asn Val Leu Ala Leu
        115
                            120
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gcccagggcg ctggagaccg catggatgag gtcatgaagg aggtgccgcg cgttcgtaag
gatgccggct accegcegct ggtcaccecg tegteccaga tegtgggaac ccaggeggtg
ttcaacgtct tgatgggcaa tggttcgtac aagaatctca ctgccgagtt tgccgacctc
atgetegget actaeggeaa geecattgge gageteaate etgagategt egagatggee
aagaagcaga ccggcaagga gccgatcgac tgccgtcccg ccgacttgct cgagcctgag
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gttcttacca acgcg
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Lys Glu Val Pro Arg Val Arg Lys Asp Ala Gly Tyr Pro Pro Leu Val
                            40
Thr Pro Ser Ser Gln Ile Val Gly Thr Gln Ala Val Phe Asn Val Leu
Met Gly Asn Gly Ser Tyr Lys Asn Leu Thr Ala Glu Phe Ala Asp Leu
                    70
Met Leu Gly Tyr Tyr Gly Lys Pro Ile Gly Glu Leu Asn Pro Glu Ile
Val Glu Met Ala Lys Lys Gln Thr Gly Lys Glu Pro Ile Asp Cys Arg
                                105
            100
Pro Ala Asp Leu Leu Glu Pro Glu Trp Asp Gln Leu Val Glu Gln Ala
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Lys Ser Leu Glu Gly Phe Asp Gly Ser Asp Glu Asp Val Leu Thr Asn
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Ala
145
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gaggtegteg geategtega ggteatggag caggeetaet gggeggegeg aegeggege
acgategict aegieggge geigggeate gaegeeaage iggieetgee ggegaaegae
ctgcacggcg gcgccaagac gatcatcggc tgcgccaacg gattgggcgc agtgcgcacc
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acgcgt
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Gly Arg Gly Val Asp Phe Ala Ile Glu Val Val Gly Ile Val Glu Val
                            40
Met Glu Gln Ala Tyr Trp Ala Ala Arg Arg Gly Gly Thr Ile Val Tyr
```

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55
                                             60
Val Gly Ala Leu Gly Ile Asp Ala Lys Leu Val Leu Pro Ala Asn Asp
                    70
                                         75
Leu His Gly Gly Ala Lys Thr Ile Ile Gly Cys Ala Asn Gly Leu Gly
                                     90
Ala Val Arg Thr Asp Tyr Ala Lys Met Ile Ser Leu Val Glu Thr Gly
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Arg Leu Asp Leu Gly Gly Met Ile Thr Arg
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tectgeteca gggcaggece tgggcaggge aatgetgggg acaeggtggg gagtaggeca
cagettetgt gggggagtte ctatggcagg aggateatge ccageagegt ggaagageaa
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gaggggtcag ttggtgcatt cacagaacag cagggtggcc a
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Ser Ser Pro Arg Val Val Gln His Gln Ala Arg Gly Gln Ser Ala Met
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Arg Thr Ala Pro Ser Cys Ser Arg Ala Gly Pro Gly Gln Gly Asn Ala
                            40
Gly Asp Thr Val Gly Ser Arg Pro Gln Leu Leu Trp Gly Ser Ser Tyr
                        55
                                            60
Gly Arg Arg Ile Met Pro Ser Ser Val Glu Glu Gly Val Thr Leu
                    70
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                                    90
Glu Gly Ser Val Gly Ala Phe Thr Glu Gln Gln Gly Gly
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ttggcgcgcc aagcggatga agcgggggat tatatgactt atattgtgtc ttcggacctc
gatatgctgc aaatcgtaga tgaaaacacc aagatgtatc gaattctgcg gggattttcg
gatctcgagg agatggatac tccagcgatt gaagaaaaat atggaatctt gaagtcgcaa
tttttggacc tgaaggcgct gaagggggat aattcggata atattccagg cgtaccaggg
attggtgaga aaaccgcagt gaaactcttg aatgagtatg gtagcttgga ggggatttat
aatcatatca aggaaatttc gggggcgaca cagaagaaat tgattgctgg acgcgaatca
gctgagatgt ctcttaagct t
501
<210> 2594
<211> 167
<212> PRT
<213> Homo sapiens
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Arg Val Arg Pro Pro Glu Asp Phe Tyr Ala Gln Ile Pro Leu Leu Arg
Glu Leu Ile Ser Ala Leu Ser Trp Gly Phe Met Glu Val Asp Glu Tyr
                                25
Glu Ala Asp Asp Ile Ile Gly Thr Leu Ala Arg Gln Ala Asp Glu Ala
Gly Asp Tyr Met Thr Tyr Ile Val Ser Ser Asp Leu Asp Met Leu Gln
Ile Val Asp Glu Asn Thr Lys Met Tyr Arg Ile Leu Arg Gly Phe Ser
                    70
                                        75
Asp Leu Glu Glu Met Asp Thr Pro Ala Ile Glu Glu Lys Tyr Gly Ile
Leu Lys Ser Gln Phe Leu Asp Leu Lys Ala Leu Lys Gly Asp Asn Ser
                                                     110
                                105
Asp Asn Ile Pro Gly Val Pro Gly Ile Gly Glu Lys Thr Ala Val Lys
                            120
Leu Leu Asn Glu Tyr Gly Ser Leu Glu Gly Ile Tyr Asn His Ile Lys
                        135
                                            140
Glu Ile Ser Gly Ala Thr Gln Lys Lys Leu Ile Ala Gly Arg Glu Ser
                    150
                                        155
Ala Glu Met Ser Leu Lys Leu
                165
<210> 2595
<211> 928
<212> DNA
<213> Homo sapiens
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 gtcacaattt ctggggctca ctcatataac accaacaaat gggatatttg tgaagaactt
 cgcctgcggg agcttgaaga agtcaaggcc agagctgctc agatggaaaa gaccatgcgg
 tggtggtcgg actgcactgc caactggaga gaaaaatgga gtaaagttcg agctgaaagg
 aacagtgccg gaaaggaagg aagacaactc agaataaaac tagagatggc gatgaaagaa
 teggatecae tgaaacagaa acagagtttg ceaetteaga aggaggeatt agaagetaat
gttacccagg atctgaagct tcctggcttc gtagaagaat cctgtgaaca tacagaccaa
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tctacaaagg aggacacaaa taataaggaa caaggtgtgg ttattgattc tctaaaatta
agtgaggaga tgaagcccaa tctagatggt gttgatttat tcaacaatgg tggttctgga
660
aacggtgaaa cgaaaactgg gctgagactg aaagcaataa atctgccttt ggaaaatgaa
gtaactgaaa tttcagcttt gcaggtgcat ttggatgaat tccaaaaaaat cttatggaag
gaaagagaaa tgcgcacagc tttggaaaaa gaaatagaga gactggagtc ggctttgtct
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gacattcttc ttggtcaaca taatgatg
928
<210> 2596
<211> 309
<212> PRT
<213> Homo sapiens
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Arg Ser Ser Arg Cys Asn Asn Asp Gln Leu Arg His Ala Ala Thr Trp
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Trp Pro Leu Pro His Pro Pro Gly Ile Pro Val Ile Pro Ala Ser His
Phe Met Gly Tyr Asn Leu Met Leu Val Thr Ile Ser Gly Ala His Ser
                            40
Tyr Asn Thr Asn Lys Trp Asp Ile Cys Glu Glu Leu Arg Leu Arg Glu
                        55
Leu Glu Glu Val Lys Ala Arg Ala Ala Gln Met Glu Lys Thr Met Arg
65
Trp Trp Ser Asp Cys Thr Ala Asn Trp Arg Glu Lys Trp Ser Lys Val
Arg Ala Glu Arg Asn Ser Ala Gly Lys Glu Gly Arg Gln Leu Arg Ile
```

100

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105
Lys Leu Glu Met Ala Met Lys Glu Ser Asp Pro Leu Lys Gln Lys Gln
                                                125
                            120
       115
Ser Leu Pro Leu Gln Lys Glu Ala Leu Glu Ala Asn Val Thr Gln Asp
                       135
Leu Lys Leu Pro Gly Phe Val Glu Glu Ser Cys Glu His Thr Asp Gln
                   150
Phe Gln Leu Ser Ser Gln Met His Glu Ser Ile Arg Glu Tyr Leu Val
                                    170
Lys Arg Gln Phe Ser Thr Lys Glu Asp Thr Asn Asn Lys Glu Gln Gly
                                185
Val Val Ile Asp Ser Leu Lys Leu Ser Glu Glu Met Lys Pro Asn Leu
                            200
Asp Gly Val Asp Leu Phe Asn Asn Gly Gly Ser Gly Asn Gly Glu Thr
                       215
Lys Thr Gly Leu Arg Leu Lys Ala Ile Asn Leu Pro Leu Glu Asn Glu
                                        235
Val Thr Glu Ile Ser Ala Leu Gln Val His Leu Asp Glu Phe Gln Lys
                245
Ile Leu Trp Lys Glu Arg Glu Met Arg Thr Ala Leu Glu Lys Glu Ile
                                265
Glu Arg Leu Glu Ser Ala Leu Ser Leu Trp Lys Trp Lys Tyr Glu Glu
                                                285
                            280
Leu Lys Glu Ser Lys Pro Lys Asn Val Lys Glu Phe Asp Ile Leu Leu
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   290
Gly Gln His Asn Asp
305
<210> 2597
<211> 631
<212> DNA
<213> Homo sapiens
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ggctgcacct gcagctgagg gttagcagga attaggagat aacagtagaa tagggctaga
120
ctgaaaaggc ctttgatgcc aggttaggaa atttacattt tatccacaaa atccaaatcc
tcctttaata atgagatgtc tttacaagtt tttgggcaag agtggtatgg ctgacctggt
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aagcagcatg gggctgtggc agctaccaga ggtaaaggga catttcaggg aaagacttgg
caggacaaga ccttccttgg atggatggat gaataccaga aacagggacc caagagaaag
gccgagtttc atagggagag aagatgggtc atgtatgagg catgttgagc ttgtactgat
ggtgagacgt ccagtcgaca gtactaccca ctggccagtg agaaatgtgg gaccagggtt
540
caggaggaaa ctggggccgg aaatgagcat ttggaaggcg ccagggtgga agcgggtggt
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tcactccacg agtgctattt cacttacgcg t
 631
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 <212> PRT
 <213> Homo sapiens
 <400> 2598
 Met Gly Leu Trp Gln Leu Pro Glu Val Lys Gly His Phe Arg Glu Arg
                                      10
 Leu Gly Arg Thr Arg Pro Ser Leu Asp Gly Trp Met Asn Thr Arg Asn
             20
 Arg Asp Pro Arg Glu Arg Pro Ser Phe Ile Gly Arg Glu Asp Gly Ser
 Cys Met Arg His Val Glu Leu Val Leu Met Val Arg Arg Pro Val Asp
 Ser Thr Thr His Trp Pro Val Arg Asn Val Gly Pro Gly Phe Arg Arg
                                         75
 Lys Leu Gly Pro Glu Met Ser Ile Trp Lys Ala Pro Gly Trp Lys Arg
                 85
                                     90
Val Val His Ser Thr Ser Ala Ile Ser Leu Thr Arg
            100
 <210> 2599
 <211> 356
<212> DNA
<213> Homo sapiens
<400> 2599
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tgtcattttg atatgaatat tatctccatg ttggaggaag ggaaagagcc ctggactgtg
aagagetgtg tgaaaatage aagaaacca agaacgeggg aatgtgtcaa aggegtggte
acagatatee etectaaatg tacaateaag gatttgetae caaaagagaa gageagtaca
240
gaagcagtat tccacacagt ggtgttggaa agacacgaaa gccctgacat tgaagacttt
tccttcaagg aaccccagaa aaatgtgcat gattttgagt gtcaatggag agatgn
356
<210> 2600
<211> 118
<212> PRT
<213> Homo sapiens
<400> 2600
Xaa Ile Leu Tyr Arg Asp Val Met Leu Glu Asn Tyr Trp Asn Leu Val
                                    10
Ser Leu Gly Leu Cys His Phe Asp Met Asn Ile Ile Ser Met Leu Glu
Glu Gly Lys Glu Pro Trp Thr Val Lys Ser Cys Val Lys Ile Ala Arg
```

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40
        35
Lys Pro Arg Thr Arg Glu Cys Val Lys Gly Val Val Thr Asp Ile Pro
                        55
Pro Lys Cys Thr Ile Lys Asp Leu Leu Pro Lys Glu Lys Ser Ser Thr
                    70
Glu Ala Val Phe His Thr Val Val Leu Glu Arg His Glu Ser Pro Asp
                                    90
Ile Glu Asp Phe Ser Phe Lys Glu Pro Gln Lys Asn Val His Asp Phe
            100
Glu Cys Gln Trp Arg Asp
        115
<210> 2601
<211> 329
<212> DNA
<213> Homo sapiens
<400> 2601
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tacttgtaca aggegegtte ectggaagag egecaagega tgategeegg eggtggtggg
gtcaccgcct tcggcttgcg ccacaacccc aaggacactg cgcgcatgcg ccgcgaaggc
ttgatcgcct tgcccgaaga cctcggtatc cgccgcaccg acgccacccg cgaactgttg
gecgecaaga gegtggeega cetggtggag tggteeggtg gettgtgeaa eeegeeegee
aagttcagga gctggtaaat gcgcgccct
329
<210> 2602
<211> 105
<212> PRT
<213> Homo sapiens
<400> 2602
Ala Pro Ile Met Ile Tyr Gly Asp Asp Val Thr His Leu Leu Thr Glu
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Glu Gly Ile Ala Tyr Leu Tyr Lys Ala Arg Ser Leu Glu Glu Arg Gln
Ala Met Ile Ala Gly Gly Gly Val Thr Ala Phe Gly Leu Arg His
                            40
Asn Pro Lys Asp Thr Ala Arg Met Arg Arg Glu Gly Leu Ile Ala Leu
                        55
Pro Glu Asp Leu Gly Ile Arg Arg Thr Asp Ala Thr Arg Glu Leu Leu
                                         75
                    70
Ala Ala Lys Ser Val Ala Asp Leu Val Glu Trp Ser Gly Gly Leu Cys
Asn Pro Pro Ala Lys Phe Arg Ser Trp
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<210> 2603 <211> 423 100

WO 00/58473

105

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<212> DNA
 <213> Homo sapiens
 <400> 2603
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 gcatcggttc ggtggtaccg aggtcgagga cttccttcac gccgttgttc gcggagggca
 ggttgtggta agtggtcagg tgggccacga tctgggcact gatcacctcg gtgaaatcga
 agetetggtt accetgageg gtegeegaea egaeaeggte caeaeeggag accagaeega
 tctcggagat gatcgcgtaa ccttcattgt cgtagaggat cttgcacgca tcgatgatgc
 gettgatete ettggeagtg aagatgattt ecateggggt gttggeegae agataetgae
 cggagctggt ggtcacctgg gtggaatcca ggtcatccgg aaccgggttc aggttgtccg
 420
 cgg
 423
<210> 2604
<211> 103
<212> PRT
<213> Homo sapiens
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Met Glu Ile Ile Phe Thr Ala Lys Glu Ile Lys Arg Ile Ile Asp Ala
                                     10
Cys Lys Ile Leu Tyr Asp Asn Glu Gly Tyr Ala Ile Ile Ser Glu Ile
                                25
Gly Leu Val Ser Gly Val Asp Arg Val Val Ser Ala Thr Ala Gln Gly
                            40
Asn Gln Ser Phe Asp Phe Thr Glu Val Ile Ser Ala Gln Ile Val Ala
                        55
His Leu Thr Thr Tyr His Asn Leu Pro Ser Ala Asn Asn Gly Val Lys
                                        75
Glu Val Leu Asp Leu Gly Thr Thr Glu Pro Met Leu Leu Thr Thr Asp
                                    90
Leu Gly Val Gly Ala Gln Pro
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<210> 2605
<211> 354
<212> DNA
<213> Homo sapiens
<400> 2605
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aaacatatgt ggcaaacagc ggggggaggg gatctcacca acgtttttct ccacttcttc
tttgcatgct gggacctgtt ccactttcaa aatgtgtcat tttggaagga aagggaggaa
180
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caactacttg aaaggaatac acgtcagtat gagccctttc tectcageag aaggttgeee
caaagtacct cctctgaggc gagagaaagg agagaggagg agagacagct ttcatcaaat
ggggcaccca ggactctagg gagagaggca cgttctcaca aaggcccttt gagc
<210> 2606
<211> 101
<212> PRT
<213> Homo sapiens
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Met Ser Lys Ala Thr Val Ser Arg Gly Phe Asp Leu Asn Ile Phe Gln
Asn Ile Cys Gly Lys Gln Arg Gly Glu Gly Ile Ser Pro Thr Phe Phe
                                25
Ser Thr Ser Ser Leu His Ala Gly Thr Cys Ser Thr Phe Lys Met Cys
                            40
His Phe Gly Arg Lys Gly Arg Asn Asn Tyr Leu Lys Gly Ile His Val
Ser Met Ser Pro Phe Ser Ser Ala Glu Gly Cys Pro Lys Val Pro Pro
                    70
                                        75
Leu Arg Arg Glu Lys Gly Glu Arg Arg Arg Asp Ser Phe His Gln Met
                                    90
                85
Gly His Pro Gly Leu
           100
<210> 2607
<211> 297
<212> DNA
<213> Homo sapiens
<400> 2607
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tttttatget gtttttttt tttgagaacg gatcttgece ctgececcag geeggaatgg
atgacatgga cagaaccccg tcggaaaaaa gccggaatgt gcaaacccaa attcccacca
cacgggggcc ctaacaattg gatccatccc cnaaaaaanc cntnncaaaa aaagntaaaa
acttttttt ttttaaannn anacccccaa aaaaaccaaa aaaaaaaatt taaaaaa
297
<210> 2608
<211> 95
<212> PRT
<213> Homo sapiens
<400> 2608
Met Ile Arg Tyr Pro Asn Gln Gln Arg Lys Gln Arg Lys Leu Leu
Phe Leu Cys Cys Phe Phe Phe Leu Arg Thr Asp Leu Ala Pro Ala Pro
```

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20
                                 25
                                                      30
 Arg Pro Glu Trp Met Thr Trp Thr Glu Pro Arg Arg Lys Lys Ala Gly
                             40
 Met Cys Lys Pro Lys Phe Pro Pro His Gly Gly Pro Asn Asn Trp Ile
 His Pro Xaa Lys Xaa Pro Xaa Gln Lys Lys Xaa Lys Thr Phe Phe Phe
                     70
 Leu Xaa Xaa Xaa Pro Gln Lys Asn Gln Lys Lys Phe Lys Lys
                 85
                                     90
 <210> 2609
 <211> 305
 <212> DNA
 <213> Homo sapiens
 <400> 2609
negecategg catgatgtea ggcaaagatg atcetggeat ggcaaaggta taeggttttg
ttgacacgtc cctgacgatc cctatccgct catctggaga cccatgcgtt ccttggaccc
120
caattgccta cgaaaaaatt tttttttcc cccccaaaaa acacccccc ctcgcatctg
tgaaagttct acctcggggt cgtcatctcg gctgtcatcg tcggcaaatc actcagctgg
ccgtaccctt cgtcatcgcc cgggccaccg acctcgacgg cncagcgtgc acggcaacga
ccacc
305
<210> 2610
<211> 98
<212> PRT
<213> Homo sapiens
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Met Met Ser Gly Lys Asp Asp Pro Gly Met Ala Lys Val Tyr Gly Phe
1
                                    10
Val Asp Thr Ser Leu Thr Ile Pro Ile Arg Ser Ser Gly Asp Pro Cys
Val Pro Trp Thr Pro Ile Ala Tyr Glu Lys Ile Phe Phe Pro Pro
                            40
Lys Lys His Pro Pro Leu Ala Ser Val Lys Val Leu Pro Arg Gly Arg
His Leu Gly Cys His Arg Arg Gln Ile Thr Gln Leu Ala Val Pro Phe
                    70
                                       75
Val Ile Ala Arg Ala Thr Asp Leu Asp Gly Xaa Ala Cys Thr Ala Thr
               85
Thr Thr
<210> 2611
<211> 342
<212> DNA
<213> Homo sapiens
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<400> 2611

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acgeccageg ccaeegetgt eggageteag gtgegeegeg tegaggtgge aacagecaae
ggcaccagca caattegett egaccagece ggcaageege tgaeggegge getgeeetae
ggcgagacct catgggtccg gttcaccgcg accggcaccg acgacggctc ccccggcgtg
cagtteggea teacegactt eteegtgacg cagtacgacg eg
342
<210> 2612
<211> 114
<212> PRT
<213> Homo sapiens
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Ala Ala Ala Ile Asp Gly Asp Ser Ser Thr Ser Trp Val Ser Ser Ser
                                    10
Leu Gln Thr Ala Val Gly Gln Trp Leu Gln Val Asp Phe Asp His Pro
Val Thr Asn Ala Thr Ile Thr Leu Thr Pro Ser Ala Thr Ala Val Gly
Ala Gln Val Arg Arg Val Glu Val Ala Thr Ala Asn Gly Thr Ser Thr
Ile Arg Phe Asp Gln Pro Gly Lys Pro Leu Thr Ala Ala Leu Pro Tyr
Gly Glu Thr Ser Trp Val Arg Phe Thr Ala Thr Gly Thr Asp Asp Gly
                                    90
Ser Pro Gly Val Gln Phe Gly Ile Thr Asp Phe Ser Val Thr Gln Tyr
                                                    110
            100
Asp Ala
<210> 2613
<211> 414
<212> DNA
<213> Homo sapiens
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tatgccccta ctgggaaggg ccaagtgggc aggcagagtc tggggtggag cgaggtgggg
ctgggaagca ctcctgcttt tctgctgccc cagaacgaat gcaagttctg gcagcttctc
ctcctcctgg gaggaggaaa ggagggctcg cctccaggtc tcaggctgag ggagtgggct
300
```

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ggagaccete tagatggeca geagaggetg geetetgtga gaaggettee ttgegtgaet
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 <210> 2614
 <211> 107
 <212> PRT
 <213> Homo sapiens
 <400> 2614
 Met Val Leu Cys Leu Met Phe Ser Arg Tyr Ala Pro Thr Gly Lys Gly
                                     10
 Gln Val Gly Arg Gln Ser Leu Gly Trp Ser Glu Val Gly Leu Gly Ser
                                 25
 Thr Pro Ala Phe Leu Leu Pro Gln Asn Glu Cys Lys Phe Trp Gln Leu
                             40
Leu Leu Leu Gly Gly Gly Lys Glu Gly Ser Pro Pro Gly Leu Arg
Leu Arg Glu Trp Ala Gly Asp Pro Leu Asp Gly Gln Gln Arg Leu Ala
Ser Val Arg Arg Leu Pro Cys Val Thr Leu Gly Pro Leu Pro Gly Ser
                                     90
Pro Arg Gly Arg Gln Gly Leu Gly Pro Ala Trp
<210> 2615
<211> 394
<212> DNA
<213> Homo sapiens
<400> 2615
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aacaatgcgg gcgtcacgca tgcggccgat ttcctcgacg tgtgcgaaga cgatttcgac
cgggtcatgc gcattaacct gaaatcgatg ttcctgtgcg gccaggccgc ggcgcgcgag
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attecgaace aggtgeegta egtggtgteg aaaggegeea teaaceaget gaccaaggte
atggccttga acctggcgcc gcacggtgcg cgct .
394
<210> 2616
<211> 131
<212> PRT
<213> Homo sapiens
<400> 2616
Xaa Ala Ala Ala Leu Gly Arg Ser Ala Leu Leu Leu Arg Xaa Asp Val
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Ser Gln Lys Ala Asp Val Asp Ala Met Leu Lys Glu Thr Leu Ala Gln
                                25
            20
Phe Gly His Ile Asp Ile Leu Val Asn Asn Ala Gly Val Thr His Ala
                            40
Ala Asp Phe Leu Asp Val Cys Glu Asp Asp Phe Asp Arg Val Met Arg
Ile Asn Leu Lys Ser Met Phe Leu Cys Gly Gln Ala Ala Ala Arg Glu
                    70
Met Val Lys Arg Asn Ser Gly Cys Ile Ile Asn Met Ser Ser Val Asn
                85
                                    90
Ala Glu Leu Ala Ile Pro Asn Gln Val Pro Tyr Val Val Ser Lys Gly
                                105
            100
Ala Ile Asn Gln Leu Thr Lys Val Met Ala Leu Asn Leu Ala Pro His
                                                125
                            120
        115
Gly Ala Arg
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<210> 2617
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<212> DNA
<213> Homo sapiens
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300
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tgcttcgccg atcgacgcgt caccactctc tca
513
<210> 2618
<211> 171
<212> PRT
<213> Homo sapiens
<400> 2618
Xaa Arg Leu Ala Ser Cys Ser Gln His Trp Gly Phe Pro Ser Phe Phe
1
Ser Ser Ser Glu Arg His Cys Glu Met Gly Asn Ile Met Glu Thr Pro
Ile Leu Ser Gly Ser His Leu Asn Val Thr Leu Gly Asn His Lys Ile
```

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40
  Leu Asn Asp Val Ser Val Ser Phe Gln Ala Gly Val Met His Ala Ile
                                              60
 Leu Gly Pro Asn Gly Ser Gly Lys Thr Thr Leu Val Arg Thr Leu Cys
                     70
 Gly Ala Leu Ser Pro Glu Ser Gly Ser Val Lys Phe Asp Gly Thr Asp
                                      90
 Leu Ser Thr Met Ser Ala Ser Cys Ile Ala Arg Arg Ile Ala Ile Val
                                 105
 Trp Gln Ser Ala Thr Ala Pro Ser Asp Leu Thr Val Arg His Leu Val
                             120
 Gly Tyr Gly Arg Tyr Ala His Thr Pro Trp Trp Gln Ile Arg Asp Thr
                         135
                                              140
 Ser Ala Asp Ser His Val Glu Gln Ala Met Glu Leu Ala Asp Val Thr
                     150
 Cys Phe Ala Asp Arg Arg Val Thr Thr Leu Ser
                 165
 <210> 2619
 <211> 348
 <212> DNA
 <213> Homo sapiens
 <400> 2619
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cagcacgtca ttttccttga taacggtcgt accgacgtgc ttgccgacac ccttggtcgc
gaagtgttgc ggtgcatccg gtgtgcttcg tgtatcaata tctgcccggt ttacgagcgg
gegggeggte accettacgg creggtgtac ceegggeega trggtgeggt gereaateeg
cagetgeggg gegtggagea tecegtegat egtggtetge cataegeg
348
<210> 2620
<211> 116
<212> PRT
<213> Homo sapiens
<400> 2620
Xaa Asn Phe Asp Asp Leu Glu Val Phe Leu Lys Leu Leu Pro Arg Ser
                                    10 .
Ala Xaa Gly Glu Arg Met Asn Pro Tyr Asn Ser Val Trp Ser Gly Val
Thr Asp Gly Asp Gly Pro Gln Glu Gln His Val Ile Phe Leu Asp Asn
                            40
Gly Arg Thr Asp Val Leu Ala Asp Thr Leu Gly Arg Glu Val Leu Arg
Cys Ile Arg Cys Ala Ser Cys Ile Asn Ile Cys Pro Val Tyr Glu Arg
Ala Gly Gly His Pro Tyr Gly Ser Val Tyr Pro Gly Pro Ile Gly Ala
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85
                                    90
Val Leu Asn Pro Gln Leu Arg Gly Val Glu His Pro Val Asp Arg Gly
           100
                                105
Leu Pro Tyr Ala
        115
<210> 2621
<211> 1485
<212> DNA
<213> Homo sapiens
<400> 2621
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360
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acattagaga ataaacagcc acacacat tttttttcc tttaaaacag taacttggaa
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Ala Ser Pro Ser Pro Leu Leu Val Gly Gly Ala Arg Val Leu Leu Gly
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Gly Met Val Met Phe Asn His Arg Leu Pro Pro Val Thr Ser Phe Thr
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Ser Thr Ser Ala Ala Pro Ala Ala Glu Pro Pro Pro Pro Pro Ala Pro
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Asp Met Thr Phe Lys Lys Glu Pro Ala Ala Ser Ala Ala Ala Phe Pro
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Ser Gln Arg Thr Ser Trp Gly Phe Leu Gln Ser Leu Val Ser Ile Lys
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Gln Glu Lys Pro Ala Asp Pro Glu Glu Gln Gln Ser His His His
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His His His Tyr Gly Gly Leu Phe Ala Gly Ala Glu Glu Arg Ser
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Pro Gly Leu Gly Gly Glu Gly Gly Ser His Gly Val Ile Gln Asp
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Leu Ser Ile Leu His Gln His Val Gln Gln Pro Ala Gln His His
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Arg Asp Val Leu Leu Ser Ser Ser Ser Arg Thr Asp Asp His His Gly
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Thr Glu Glu Pro Lys Gln Asp Thr Asn Val Lys Lys Ala Lys Arg Pro
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Lys Pro Glu Ser Gln Gly Ile Lys Ala Lys Arg Lys Pro Ser Ala Ser
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Ser Lys Pro Ser Leu Val Gly Asp Gly Glu Gly Ala Ile Leu Ser Pro
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Ser Gln Lys Pro His Ile Cys Asp His Cys Ser Ala Ala Phe Arg Ser
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Ser Tyr His Leu Arg Arg His Val Leu Ile His Thr Gly Glu Arg Pro
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Phe Gln Cys Ser Gln Cys Ser Met Gly Phe Ile Gln Lys Tyr Leu Leu
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Gln Arg His Glu Lys Ile His Ser Arg Glu Lys Pro Phe Gly Cys Asp
                                       315
                   310
Gln Cys Ser Met Lys Phe Ile Gln Lys Tyr His Met Glu Arg His Lys
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Arg Thr His Ser Gly Glu Lys Pro Tyr Lys Cys Asp Thr Cys Gln Gln
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Tyr Phe Ser Arg Thr Asp Arg Leu Leu Lys His Arg Arg Thr Cys Gly
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Glu Val Ile Val Lys Gly Ala Thr Ser Ala Glu Pro Gly Ser Ser Asn
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Glu Gln Lys Thr Gly Lys Thr Asn Glu Ser Gln Ile Ser Asn Asn Ile
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Asn Met Gln Ser Tyr Ser Val Glu Met Pro Thr Val Ser Ser Ser Gly
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 Pro Thr Ala Ser Ser Asn Ser Ala Phe Ser Ile Asn Val Gly His Met
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Pro Ser Asn Asp Lys Ala Ser Met Leu Gln Glu Tyr Ser Lys Tyr Leu
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Gly Gln Ser Val Thr Ser Val Leu Pro Ser Ser Leu Pro Lys Pro Pro
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Phe Gly Met Leu Phe Gly Ser Gln Pro Gly Leu Tyr Leu Ser Ala Leu
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Asp Ala Thr His Gln Gln Leu Thr Pro Ser Gln Glu Leu Asp Asp Leu
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Gln Lys Asp Ile Glu Pro Arg Thr Thr Tyr Gln Ile Glu Asn Phe Ala
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Gln Ala Phe Gly Ser Gln Phe Lys Ser Gly Ser Arg Val Pro Met Thr
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Phe Ile Thr Asn Ser Asn Gly Glu Val Asp His Arg Val Arg Thr Ser
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Val Ser Asp Phe Ser Gly Tyr Thr Asn Met Met Ser Asp Val Ser Glu
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PCT/US00/08621

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<213> Homo sapiens

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WO 00/58473

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 Glu Gln Leu Gly Ser Tyr Asp Pro Leu Pro Asn Ser His Gly Glu Lys
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Leu Val Ala Leu Asn Leu Asp Arg Ile Arg His Trp Ile Gly Cys Gly
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Ala His Leu Ser Lys Pro Met Glu Lys Leu Leu Gly Leu Ala Gly Phe
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Phe Pro Leu His Pro Met Met Ile Thr Asn Ala Glu Arg Leu Arg Arg
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: Ile Gln Ile Arg Lys Asn Glu Tyr Asp Leu Ile Leu Asn Ser Asp Ile
Asn Ser Asn His Tyr His Gln Trp Phe Tyr Phe Glu Val Ser Gly Met
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Arg Pro Gly Val Ala Tyr Arg Phe Asn Ile Ile Asn Cys Glu Lys Ser
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Asn Ser Gln Phe Asn Tyr Gly Met Gln Pro Leu Met Tyr Ser Val Gln
                                 105
Glu Ala Leu Asn Ala Arg Pro Trp Trp Ile Arg Met Gly Thr Asp Ile
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                             120
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Cys Tyr Tyr Lys Asn His Phe Ser Arg Ser Ser Val Ala Ala Gly Gly
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Gln Lys Gly Lys Ser Tyr Tyr Thr Ile Thr Phe Thr Val Asn Phe Pro
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His Lys Asp Asp Val Cys Tyr Phe Ala Tyr His Tyr Pro Tyr Thr Tyr
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Ser Thr Leu Gln Met His Leu Gln Lys Leu Glu Ser Ala His Asn Pro
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Gln Gln Ile Tyr Phe Arg Lys Asp Val Leu Cys Glu Thr Leu Ser Gly
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Asn Ser Cys Pro Leu Val Thr Ile Thr Ala Met Pro Glu Ser Asn Tyr
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Tyr Glu His Ile Cys His Phe Arg Asn Arg Pro Tyr Val Phe Leu Ser
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 Ala Arg Val His Pro Gly Glu Thr Asn Ala Ser Trp Val Met Lys Gly
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 Thr Leu Glu Tyr Leu Met Ser Asn Asn Pro Thr Ala Gln Ser Leu Leu
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 Ile Asn Gly Asn His Arg Cys Ser Leu Ser Gly Glu Asp Leu Asn Arg
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 Gln Trp Gln Ser Pro Ser Pro Asp Leu His Pro Thr Ile Tyr His Ala
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 Lys Gly Leu Leu Gln Tyr Leu Ala Ala Val Lys Arg Leu Pro Leu Val
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 Tyr Cys Asp Tyr His Gly His Ser Arg Lys Lys Asn Val Phe Met Tyr
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 Gly Cys Ser Ile Lys Glu Thr Val Trp His Thr Asn Asp Asn Ala Thr
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 Ser Cys Asp Val Val Glu Asp Thr Gly Tyr Arg Thr Leu Pro Lys Ile
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Leu Ser His Ile Ala Pro Ala Phe Cys Met Ser Ser Cys Ser Phe Val
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Val Glu Lys Ser Lys Glu Ser Thr Ala Arg Val Val Trp Arg Glu
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Ile Gly Val Gln Arg Ser Tyr Thr Met Glu Ser Thr Leu Cys Gly Cys
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Asp Gln Gly Lys Tyr Lys Gly Leu Gln Ile Gly Thr Arg Glu Leu Glu
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Glu Met Gly Ala Lys Phe Cys Val Gly Leu Leu Arg Leu Lys Arg Leu
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Thr Ser Pro Leu Glu Tyr Asn Leu Pro Ser Ser Leu Leu Asp Phe Glu
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Asn Asp Leu Ile Glu Ser Ser Cys Lys Val Thr Ser Pro Thr Thr Tyr
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Val Leu Asp Glu Asp Glu Pro Arg Phe Leu Glu Glu Val Asp Tyr Ser
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Ala Glu Ser Asn Asp Glu Leu Asp Ile Glu Leu Ala Glu Asn Val Gly
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Asp Tyr Glu Pro Ser Ala Gln Glu Glu Val Leu Ser Asp Ser Glu Leu
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WO 00/58473

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cggcggccgc ggggccgggt cccacctgtg gtgaggcggg aggagacgtc gccgaagggg
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Arg Gly Arg Val Pro Pro Val Val Arg Arg Glu Glu Thr Ser Pro Lys
Gly Asp Gly Ser Ile Arg Arg Tyr Phe Cys Gly Glu Ala Ala Ala
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1045

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 Leu Gln Glu Ala Gly Thr Phe Arg His Thr Leu Trp Lys Arg Val Gln
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 Gly Ala Val Thr Pro Leu Leu Ala Ser Met Ile Ser Phe Ile Asp Arg
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                                         75
 Asp Gly Asn Leu Glu Leu Leu Thr Arg Pro Asp Thr Pro Pro Trp Ala
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 Arg Asp Leu Trp Met Phe Ile Phe Ser Asp Thr Met Leu Leu Asn Ile
            100
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Pro Leu Val Met Asn Asn Glu Arg His Lys Gly Glu Met Ala Tyr Ile
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 Val Val Gln Asn His Met Asn Leu Ser Glu Asn Ala Ser Asn Asn Val
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Pro Phe Ser Trp Lys Ile Lys Asp Tyr Leu Glu Glu Leu Trp Val Gln
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Ala Gln Tyr Ile Thr Asp Ala Glu Gly Leu Pro Lys Lys Phe Val Asp
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Ile Phe Gln Gln Thr Pro Leu Gly Arg Phe Leu Ala Gln Leu His Gly
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Glu Pro Gln Gln Glu Leu Leu Gln Cys Tyr Leu Lys Asp Phe Ile Leu
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Leu Thr Met Arg Val Ser Thr Glu Glu Glu Leu Lys Phe Leu Gln Met
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Ala Leu Trp Ser Cys Thr Arg Lys Leu Lys Ala Ala Ser Glu Ala Pro
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360			aacttctctg		
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540			tttgaaaatc		
600			gatgagaagt		
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780			ggaacttcag		
840			gtggcagaaa		
900			ccaggtcatc		
960			acccctagaa		
1020			cggaaggata		
1080			caagagatag		
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Ile Ala Ala Thr Pro Thr Ser Leu Met Glu Ala Gln Ala Glu Gly Pro
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Leu Thr Ala Ile Thr Ile Pro Arg Pro Ser Val Ala Ser Thr Gln Ser
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Thr Ser Gly Ser Phe His Cys Gly Gln Gln Pro Glu Lys Glu Asp Leu
Gln Pro Met Glu Pro Thr Val Glu Leu Tyr Ser Pro Arg Glu Asn Phe
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Ser Gly Leu Val Val Thr Glu Gly Glu Pro Pro Ser Gly Gly Ser Arg
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Thr Asp Leu Gly Leu Gln Ile Asp His Ile Gly His Asp Met Leu Pro
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Asn Ile Arg Glu Ser Asn Lys Ser Gln Asp Leu Gly Pro Lys Glu Leu
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Pro Asp His Asn Arg Leu Val Val Arg Glu Phe Glu Asn Leu Pro Gly
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Glu Thr Glu Glu Lys Ser Ile Leu Leu Glu Ser Asp Asn Glu Asp Glu
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Lys Leu Ser Arg Gly Gln His Cys Ile Glu Ile Ser Ser Leu Pro Gly
Asp Leu Val Ile Val Glu Lys Asp His Ser Ala Thr Thr Glu Pro Leu
                        215
Asp Val Thr Lys Thr Gln Thr Phe Ser Val Val Pro Asn Gln Asp Lys
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Asn Asn Glu Ile Met Lys Leu Leu Thr Val Gly Thr Ser Glu Ile Ser
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Ser Arg Asp Ile Asp Pro His Val Glu Gly Gln Ile Gly Gln Val Ala
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 Gly Lys Arg Glu Lys Ile Thr Pro Arg Asn Gly Glu Leu Phe His Cys
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 Ser Ser Phe Val Thr Arg His Ser Arg Ile Pro Val Leu Ala Gln Glu
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Leu Leu Gln Lys Lys Ala Tyr Gln Pro Asp Leu Val Lys Leu Leu Val
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Glu Lys Arg Gln Phe Lys Ser Phe Leu Gly Asp Leu Ser Ser Ala Ser
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Gln Val Asn Ser Ser Thr Ser Ser Gln Phe Phe Pro Arg Pro Pro
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Gly Lys Pro Pro Thr Arg Pro Gly Val Glu Ala Arg Leu Arg Arg Tyr
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Ala Gln Ile Leu Gln Asn Gly Ser Gln Lys Pro Arg Ser Thr Thr Gln
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Cys Lys Ser Pro Gly Ser Pro His Asn Pro Lys Thr Pro Pro Lys Ser
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Pro Val Val Pro Arg Arg Ser Pro Ser Ala Ser Pro Arg Ser Ser Ser
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                                      555
Leu Pro Arg Thr Ser Ser Ser Pro Ser Arg Ala Gly Arg Pro His
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His Asp Gln Arg Ser Ser Pro His Leu Gly Arg Ser Lys Ser Pro
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Pro Ser His Ser Gly Ser Ser Ser Ser Arg Arg Ser Cys Gln Glu
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His Cys Lys Pro Ser Lys Asn Gly Leu Lys Gly Ser Gly Ser Leu His
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Glu Glu Asp Arg Asp Gly Leu Trp Asp Ala Trp Gly Pro Trp Ser Glu
Cys Ser Arg Thr Cys Gly Gly Gly Ala Ser Tyr Ser Leu Arg Arg Cys
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Leu Ser Ser Lys Ser Cys Glu Gly Arg Asn Ile Arg Tyr Arg Thr Cys
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Ser Asn Val Asp Cys Pro Pro Glu Ala Gly Asp Phe Arg Ala Gln Gln
                85
                                    90
Cys Ser Ala His Asn Asp Val Lys His His Gly Gln Phe Tyr Glu Trp
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Leu Pro Val Ser Asn Asp Pro Asp Asn Pro Cys Ser Leu Lys Cys Gln
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Ala Lys Gly Thr Thr Leu Val Val Glu Leu Ala Pro Lys Val Leu Asp
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130
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 Gly Thr Arg Cys Tyr Thr Glu Ser Leu Asp Met Cys Ile Ser Gly Leu
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 Cys Gln Ile Val Gly Cys Asp His Gln Leu Gly Ser Thr Val Lys Glu
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 Asp Asn Cys Gly Val Cys Asn Gly Asp Gly Ser Thr Cys Arg Leu Val
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 Arg Gly Gln Tyr Lys Ser Gln Leu Ser Ala Thr Lys Ser Asp Asp Thr
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 Val Val Ala Ile Pro Tyr Gly Ser Arg His Ile Arg Leu Val Leu Lys
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 Gly Pro Asp His Leu Tyr Leu Glu Thr Lys Thr Leu Gln Gly Thr Lys
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 Gly Glu Asn Ser Leu Ser Ser Thr Gly Thr Phe Leu Val Asp Asn Ser
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 Ser Val Asp Phe Gln Lys Phe Pro Asp Lys Glu Ile Leu Arg Met Ala
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 Gly Pro Leu Thr Ala Asp Phe Ile Val Lys Ile Arg Asn Ser Gly Ser
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 Ala Asp Ser Thr Val Gln Phe Ile Phe Tyr Gln Pro Ile Ile His Arg
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 Trp Arg Glu Thr Asp Phe Phe Pro Cys Ser Ala Thr Cys Gly Gly
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Tyr Gln Leu Thr Ser Ala Glu Cys Tyr Asp Leu Arg Ser Asn Arg Val
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Val Ala Asp Gln Tyr Cys His Tyr Tyr Pro Glu Asn Ile Lys Pro Lys
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Pro Lys Leu Gln Glu Cys Asn Leu Asp Pro Cys Pro Ala Ser Asp Gly
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Tyr Lys Gln Ile Met Pro Tyr Asp Leu Tyr His Pro Leu Pro Arg Trp
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Glu Ala Thr Pro Trp Thr Ala Cys Ser Ser Ser Cys Gly Gly Ile
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Gln Ser Pro Gly Ser Phe Leu Cys Gly Gly Gly His Pro Gly Ala Cys
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gacaaaacag gcagcatcaa tatctctgtc tgggacgatg ttggcaatct gatccagcct
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ggggacatta teeggeteae caaagggtae getteagttt teaaaggttg tetgacaeta

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Leu Asn Leu Ile Phe Ile Val Leu Glu Thr Gly Arg Val Thr Lys Thr
Lys Asp Gly His Glu Val Arg Thr Cys Lys Val Ala Asp Lys Thr Gly
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Ser Ile Asn Ile Ser Val Trp Asp Asp Val Gly Asn Leu Ile Gln Pro
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Gly Asp Ile Ile Arg Leu Thr Lys Gly Tyr Ala Ser Val Phe Lys Gly
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Cys Leu Thr Leu Tyr Thr Gly Arg Gly Gly Asp Leu Gln Lys Ile Gly
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Glu Phe Cys Met Asp Tyr Ser Glu Val Pro Asn Phe Ser Glu Pro Asn
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                            120
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Pro Glu Tyr Ser Thr Gln Gln Ala Pro Asn Lys Ala Val Gln Asn Asp
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Ser Asn Pro Ser Ala Ser Gln Pro Thr Thr Gly Pro Ser Ala Ala Ser
                                        155
                    150
Pro Ala Ser Glu Asn Gln Asn Gly Asn Gly Met Ser Ala Pro Pro Gly
                                    170
                165
Phe Arg Val Val Ala His Ile Pro Leu Ile Leu Pro Pro Thr His Pro
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Ala Pro Glu Ser Leu Glu Ala Ser Pro Thr Thr His Leu Gln Ala Arg
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                            200
Leu
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caaatageet geagtgette etgtgaaata gtgaaggagg agggeattte tgtatteeag
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Asp Arg Asp Tyr Pro Gly
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caagagaatg aagacettca egetttetet gtaagtttte atteaaaaca tettteaatt
tetttttttt ettttette titttigece teatittagt tagittgagt tiettgigge
360
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totgtagtga otgototaat agaatatooc ttacaacttt gtggcagtta atttotggat
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 ttatttcacc tggactgaga ggctctccaa agccagtaac ttcccctgga ctccttggtt
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Arg Cys Leu Leu Met Pro Gln Cys Asn Ala Phe Leu Ser Lys Ile Met
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Thr Ser Leu Leu Ser Pro Pro His Arg Arg Pro Thr Leu His Arg Arg
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Pro Thr Leu Pro Tyr Arg Thr Trp Glu Ala Ala Leu Arg Gln Lys Val
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Gln Gln Trp Tyr Thr Ala Val Gly Gln Thr Glu Asn Pro Asp Asn Cys
Ala Glu Lys Leu Gly Leu Cys Pro Gln Phe Phe Lys Val Leu Gly Glu
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Val Asn Pro Leu Glu Glu Lys Pro Phe His Glu Leu Pro Phe Tyr Gln
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                           120
Lys Val Trp Leu Leu Lys Gly Leu Cys Asp Phe Val Tyr Asp Thr His
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Lys Glu Val Gln Asp Ala Val Leu Gly Gln Pro Ile His Glu Cys Arg
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                   150
Ala Val Ile Leu Arg Tyr Asp Tyr Leu Glu Thr Ala Tyr Val His Phe
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Pro Gln Phe Cys Gly Ala Asp Val Arg Ile Tyr Lys Gln Arg Pro Phe
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Gln Ala Pro Glu Phe Pro Ile Pro Pro Ile Lys Ile Gln Arg Val Pro
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Arg Ile Lys Leu Glu Lys Leu Lys Cys Asp Tyr Val Ser Thr Ser Asn
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Gly Glu His Arg Cys Ser Arg Asp Ser Leu Pro Ser Ser Phe Lys Lys
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Glu Gln Glu Asn Asn Phe Asp Pro Ala Cys Cys Pro Ala Lys Met Ile
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Leu Asp Asn His Asp Ile Ser Val Glu Met Gly Val Lys Ser Asn Tyr
Glu Ile Arg Ile Arg Arg Pro Cys Glu Ile Lys Lys Thr Asp Cys Cys
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Lys Glu Asn Leu Glu Lys Pro Arg Ser Pro Gly Glu Val Thr Gly Phe
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Gly Glu Pro Leu Ser Pro Gly Glu Ile Arg Phe Ile Glu Asn Gln Glu
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Lys Tyr Gly Glu Ala Ser Arg Ile Lys Ile Glu Pro Ser Pro Leu Lys
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Glu Asn Thr Leu Lys Ser Cys Gln Ile His Val Asn Gly Ser His Ser
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Asp His Pro Glu Ile Asn Cys His Lys Val Val Arg Asp Ile Leu Leu
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Glu Gln Ser Leu Gln Ser His Lys Lys Leu Lys Leu Thr Lys Met Arg
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Ala Lys Lys Lys Lys Lys Lys Lys Lys Leu Lys Asp Val Leu Asn
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                   390
Glu Asn Leu Gln Arg Lys Arg Glu Gly Leu His Ser Leu Ala Phe Lys
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Ser Tyr Lys Pro Glu Ile Gln Asn Lys Leu Leu Ile Ile Lys Lys
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420
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 Ala Lys His Lys Lys His Lys Ser Gly Lys Lys Ser Val Ser Lys Lys
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 Ala Ile Thr Lys Lys Arg Lys Thr Val Ile Lys Ser Pro Thr Val Pro
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 Glu Phe Gln Leu Ile Cys Thr Asn Leu Asp Glu Leu Arg Glu Leu Ile
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 Thr Lys Ile Glu Asn Glu Leu Lys Asp Leu Glu Lys Lys
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Asp Leu Gly Gly His Gly Gly Ser Met Pro Ser Thr Ala Gly Trp Gly
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Ala Leu Pro Gly Pro Ala Pro Ser Met His Gly Trp
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 Gln Arg Val Glu Ala Leu Pro Arg Pro Val Pro Gln Asn Leu Pro Gln
 Pro Gln Met Pro Pro Tyr Ala Phe Ala His Pro Pro Phe Pro Leu Pro
 Pro Val Arg Pro Val Phe Asn Asn Phe Pro Leu Asn Met Gly Pro Ile
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 Pro Ala Pro Tyr Val Pro Pro Leu Pro Asn Val Arg Val Asn Tyr Asp
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 Phe Gly Pro Ile His Met Pro Leu Glu His Asn Leu Pro Met His Phe
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 Gly Pro Gln Pro Arg His Arg Phe
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caagtgctac cactttctga tgtggataca acttctgcta cagatattca aagagtagct
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Lys Leu Glu Met Lys Ala Leu Arg Glu Leu Asp Arg Phe Ser Val Leu
Asn Ser Gln His Met Phe Glu Val Leu Ala Ala Met Asn His Arg Ser
Leu Ile Leu Leu Asp Glu Cys Ser Lys Val Val Leu Asp Asn Ile His
Gly Cys Pro Leu Arg Ile Met Ile Asn Ile Leu Gln Ser Cys Lys Asp
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Leu Gln Tyr His Asn Leu Asp Leu Phe Lys Gly Leu Ala Asp Tyr Val
                                105
Ala Ala Thr Phe Asp Ile Trp Lys Phe Arg Lys Val Leu Phe Ile Leu
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Ile Leu Phe Glu Asn Leu Gly Phe Arg Pro Val Gly Leu Met Asp Leu
                        135
Phe Met Lys Arg Ile Val Glu Asp Pro Glu Ser Leu Asn Met Lys Asn
                                        155
                    150
Ile Leu Ser Ile Leu His Thr Tyr Ser Ser Leu Asn His Val Tyr Lys
                                    170
Cys Gln Asn Lys Glu Gln Phe Val Glu Val Met Ala Ser Ala Leu Thr
           180
                                185
Gly Tyr Leu His Thr Ile Ser Ser Glu Asn Leu Leu Asp Ala Val Tyr
                            200
Ser Phe Cys Leu Met Asn Tyr Phe Pro Leu Ala Pro Phe Asn Gln Leu
                                            220
                       215
Leu Gln Lys Asp Ile Ile Ser Glu Leu Leu Thr Ser Asp Asp Met Lys
                   230
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Asn Ala Tyr Lys Leu His Thr Leu Asp Thr Cys Leu Lys Leu Asp Asp
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Thr Val Tyr Leu Arg Asp Ile Ala Leu Ser Leu Pro Gln Leu Pro Arg
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 Glu Leu Pro Ser Ser His Thr Asn Ala Lys Val Ala Glu Val Leu Ser
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 Ser Leu Leu Gly Gly Glu Gly His Phe Ser Lys Asp Val His Leu Pro
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 His Asn Tyr His Ile Asp Phe Glu Ile Arg Met Asp Thr Asn Arg Asn
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 Gln Val Leu Pro Leu Ser Asp Val Asp Thr Thr Ser Ala Thr Asp Ile
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 Gln Arg Val Ala Val Leu Cys Val Ser Arg Ser Ala Tyr Cys Leu Gly
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 Ser Ser His Pro Arg Gly Phe Leu Ala Met Lys Met Arg His Leu Asn
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 Ala Met Gly Phe His Val Ile Leu Val Asn Asn Trp Glu Met Asp Lys
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 Leu Glu Met Glu Asp Ala Val Thr Phe Leu Lys Thr Lys Ile Tyr Ser
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Gln Val Leu Arg Arg Thr Pro Arg Thr Lys Met Phe Thr Pro Pro Ser
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Glu Ser Gln Leu Val Asp Thr Gly Thr Gln Thr Asp Ile Thr Phe Glu
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Lys Pro Leu Ala Glu Ile Tyr Glu Gln His Val Thr Lys Val Asn Glu
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Gln Glu Val Glu Arg Asn Val Glu Ala Val Arg Asn Ala Lys Asp Glu
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His Cys Val Ser Ala Phe Val Lys Leu Ala Gln Ser Glu Tyr Gln Leu
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Leu Ala Asp Ile Ile Pro Glu His His Gln Lys Lys Thr Phe Asp Ser
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Leu Ile Gln Asp Ala Leu Asp Gly Leu Met Leu Glu Gly Glu Asn Ile
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Val Ser Ala Ala Arg Lys Ala Ile Val Arg His Asp Phe Ser Thr Val
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Phe Asp Gln Val Leu Gln Gly Thr Ala Ala Ser Thr Lys Asn Lys Leu
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Pro Gly Leu Ile Thr Ser Met Glu Thr Ile Gly Ala Lys Ala Leu Glu
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Ser Trp Leu Lys Val Thr Asp Tyr Ile Ala Glu Lys Asn Leu Pro Val
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WO 00/58473

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 Gln Cys Gly Ala Trp Val Gly Gln Cys Ala Leu Tyr Ile Val Ile Met 35

 Ile Phe Glu Lys Ser Val Val Phe Ile Val Leu Leu Leu Leu Gln Trp 50

 Lys Lys Val Ala Leu Leu Asn Pro Ile Glu Asn Pro Asp Leu Lys Leu 65

 Ala Ile Val Met Leu Ile Val Pro Phe Phe Val Asn Ala Leu Met Phe 85

 Trp Val Val Asp Asn Phe Leu Met Arg Lys Gly Lys Thr Lys Ala Lys 100

 Leu Glu Glu Arg Gly Ala Asn Gln Asp Ser Arg Asn Gly Ser Lys Val

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Arg Tyr Arg Arg Ala Ala Ser His Glu Glu Ser Glu Ser Glu Ile Leu
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Ile Ser Ala Asp Asp Glu Met Glu Glu Ser Asp Val Glu Glu Asp Leu
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Arg Val Arg Met Gln Gly Val Gly Pro Ser Trp Gly Gln Ser Pro Gly
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Pro Gly Met Arg Glu Leu Ser His Leu Leu Pro Cys Val Ser Ala Pro
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Ser Gln Leu Leu Ser Cys Ser Leu Gly Gly Leu Val Arg Asn Leu Gly
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 Leu Val Ser Ala Ala Ala Ser Arg Pro Trp Met Ala Arg Cys Ala
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 Val Gly Arg His Arg Gly Cys Thr Arg Thr Gln Pro Asp Leu Gly Gln
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 Phe Ala Pro Thr Leu Leu His Ser Arg Gly Pro Gly Ser Thr Cys Gln
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 Cys Gly Ser Gln Asn Ala Gln Ala Lys Tyr Arg Asp Gln Leu Thr Ile
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Ser Arg Val Arg Ala Val Pro Gly Asn Lys Ala Lys Val His Leu Ser
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His Arg Pro Pro Gly Leu Val Arg Leu Ala Pro Ser Pro Pro Leu His
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Met Val Met Lys
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Leu Ile Leu Leu Ile His Cys Asp Thr Tyr Leu His Thr Pro Met Tyr
Phe Phe Ile Ser Gln Leu Ser Leu Met Asp Met Ala Tyr Ile Ser Val
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Thr Val Pro Lys Met Leu Leu Asp Gln Val Met Gly Val Asn Lys Ile
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Cys Leu Phe Leu Ala
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Arg Ser Arg Ala Leu Gly Pro Arg Ala Trp Val Asp Leu Ala His Leu
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Gln Leu Leu Asp Ile Ala Gly Asn Gln Leu Thr Glu Ile Pro Glu Gly
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Leu Pro Pro Ser Leu Glu Tyr Leu Tyr Leu Gln Asn Asn Lys Ile Ser
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Ala Val Pro Ala Ser Ala Phe Asp Ser Thr Pro Asn Leu Lys Gly Ile
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180

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Met Gly Tyr Val His Arg Ser Val Lys Ala Ser His Ile Leu Ile Ser
                                                  45
Val Asp Gly Lys Val Tyr Leu Ser Gly Leu Arg Ser Asn Leu Ser Met
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 Ile Ser His Gly Gln Arg Gln Arg Val Val His Asp Phe Pro Lys Tyr
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 Ser Val Lys Val Leu Pro Trp Leu Ser Pro Glu Val Leu Gln Gln Asn
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Leu Gln Gly Tyr Asp Ala Lys Ser Asp Ile Tyr Ser Val Gly Ile Thr
             100
                                 105
Ala Cys Glu Leu Ala Asn Gly His Val Pro Phe Lys Asp Met Pro Ala
                                                  125
                             120
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 Thr Gln Met Leu Leu Glu Lys Leu Asn Gly Thr Val Pro Cys Leu Leu
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                         135
Asp Thr Ser Thr Ile Pro Ala Glu Glu Leu Thr Met Ser Pro Ser Arg
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 cataacaaca acatcaagge cateccagaa aaggeettea tggggaacee tetgetacag
 acgatacact tttatgataa cccaatccag tttgtgggaa gatcggcatt ccagtacctg
 cctaaactcc acacactatc tctgaatggt gccatggaca tccaggagtt tccagatctc
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                                25
Glu Thr Leu Asp Leu Asn Tyr Asn Lys Leu Gln Glu Phe Pro Val Ala
                            40
Ile Arg Thr Leu Gly Arg Leu Gln Glu Leu Gly Phe His Asn Asn Asn
                        55
Ile Lys Ala Ile Pro Glu Lys Ala Phe Met Gly Asn Pro Leu Leu Gln
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Thr Ile His Phe Tyr Asp Asn Pro Ile Gln Phe Val Gly Arg Ser Ala
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Phe Gln Tyr Leu Pro Lys Leu His Thr Leu Ser Leu Asn Gly Ala Met
            100
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Asp Ile Gln Glu Phe Pro Asp Leu Lys Gly Thr Thr Ser Leu Glu Ile
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Leu Thr Leu Thr Arg Ala Gly Ile Arg Leu Leu Pro Ser Gly Met Cys
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                                            140
Gln Gln Leu Pro Arg Leu Arg Val Leu Glu Leu Ser His Asn Gln Ile
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Glu Glu Leu Pro Ser Leu His Arg Cys Gln Lys Leu Glu Glu Ile Gly
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Leu Gln His Asn Arg Ile Trp Glu Ile Gly Ala Asp Thr Phe Ser Gln
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Leu Ser Ser Leu Gln Ala Leu Asp Leu Arg Trp Asn Ala Ile Arg Ser
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Ile His Pro Glu Ala Phe Ser Thr Leu His Ser Leu Val Lys Leu Asp
                        215
Leu Thr Asp Asn Gln Leu Thr Thr Leu Pro Leu Ala Gly Leu Gly Gly
                    230
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Leu Met His Leu Lys Leu Lys Gly Asn Leu Ala Leu Ser Gln Ala Phe
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Ser Lys Asp Ser Phe Pro Lys Leu Arg Ile
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gacagetgtt atcccageaa tgacageegg cagatgeace aggeeetgea ggaetteete

1380

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Ala Pro Glu Asp Cys Thr Ser Phe Ser Ile Asn Ala Ser Pro Gly Val
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Val Val Asp Ile Ala His Ser Pro Pro Ala Lys Lys Ser Thr Gly
Ser Ser Thr Trp Pro Leu Asp Pro Gly Val Glu Val Thr Leu Thr Met
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Lys Ala Ala Ser Gly Ser Thr Gly Asp Gln Lys Val Gln Ile Ser Tyr
                85
Tyr Gly Pro Lys Thr Pro Pro Val Lys Ala Leu Leu Tyr Leu Thr Ala
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Val Glu Ile Ser Leu Cys Ala Asp Ile Thr Arg Thr Gly Lys Val Lys
Pro Thr Arg Ala Val Lys Asp Gln Arg Thr Trp Thr Trp Gly Pro Cys
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Leu Gln Asp Met Ser Leu Met Thr Leu Ser Thr Lys Thr Pro Lys Asp
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Phe Phe Thr Asn His Thr Leu Val Leu His Val Ala Arg Ser Glu Met
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Asp Lys Val Arg Val Phe Gln Ala Thr Arg Gly Lys Leu Ser Ser Lys
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                                           220
Cys Ser Val Val Leu Gly Pro Lys Trp Pro Ser His Tyr Leu Met Val
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                   230
Pro Gly Gly Lys His Asn Met Asp Phe Tyr Val Glu Ala Leu Ala Phe
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Pro Asp Thr Asp Phe Pro Gly Leu Ile Thr Leu Thr Ile Ser Leu Leu
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Asp Thr Ser Asn Leu Glu Leu Pro Glu Ala Val Val Phe Gln Asp Ser
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Val Val Phe Arg Val Ala Pro Trp Ile Met Thr Pro Asn Thr Gln Pro
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Pro Gln Glu Val Tyr Ala Cys Ser Ile Phe Glu Asn Glu Asp Phe Leu
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Lys Ser Val Thr Thr Leu Ala Met Lys Ala Lys Cys Lys Leu Thr Ile
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Cys Pro Glu Glu Glu Asn Met Asp Asp Gln Trp Met Gln Asp Glu Met
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Glu Ile Gly Tyr Ile Gln Ala Pro His Lys Thr Leu Pro Val Val Phe
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                           360
Asp Ser Pro Arg Asn Arg Gly Leu Lys Glu Phe Pro Ile Lys Arg Val
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Met Gly Pro Asp Phe Gly Tyr Val Thr Arg Gly Pro Gln Thr Gly Gly
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Thr Val Arg Gly Lys Glu Tyr Pro Leu Gly Arg Ile Leu Phe Gly Asp
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Ser Cys Tyr Pro Ser Asn Asp Ser Arg Gln Met His Gln Ala Leu Gln
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Asp Phe Leu Ser Ala Gln Gln Val Gln Ala Pro Val Lys Leu Tyr Ser
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Asp Trp Leu Ser Val Gly His Val Asp Glu Phe Leu Ser Phe Val Pro
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Ala Pro Asp Arg Lys Gly Phe Arg Leu Leu Leu Ala Ser Pro Arg Ser
                                   490
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Cys Tyr Lys Leu Phe Gln Glu Gln Gln Asn Glu Gly His Gly Glu Ala
                                                   510
                               505
Leu Leu Phe Glu Gly Ile Lys Lys Lys Gln Gln Lys Ile Lys Asn
                            520
Ile Leu Ser Asn Lys Thr Leu Arg Glu His Asn Ser Phe Val Glu Arg
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                                           540
Cys Ile Asp Trp Asn Arg Glu Leu Leu Lys Arg Glu Leu Gly Leu Ala
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Glu Ser Asp Ile Ile Asp Ile Pro Gln Leu Phe Lys Leu Lys Glu Phe
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Ser Lys Ala Glu Ala Phe Phe Pro Asn Met Val Asn Met Leu Val Leu
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Gly Lys His Leu Gly Ile Pro Lys Pro Phe Gly Pro Val Ile Asn Gly
Arg Cys Cys Leu Glu Glu Lys Val Cys Ser Leu Leu Glu Pro Leu Gly
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                                             620
Leu Gln Cys Thr Phe Ile Asn Asp Phe Phe Thr Tyr His Ile Arg His
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1020
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 Leu Thr Asn Glu Gln Leu Glu Ser Ala Arg Lys Ile Val His Asp Tyr
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 Arg Gln Gly Ile Val Pro Pro Gly Leu Thr Glu Asn Glu Leu Trp Arg
                     70
                                         75
 Ala Lys Tyr Ile Tyr Asp Ser Ala Phe His Pro Asp Thr Gly Glu Lys
                 85
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Met Ile Leu Ile Gly Arg Met Ser Ala Gln Val Pro Met Asn Met Thr
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                                 105
Ile Thr Gly Cys Met Met Thr Phe Tyr Arg Thr Thr Pro Ala Val Leu
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Phe Trp Gln Trp Ile Asn Gln Ser Phe Asn Ala Val Val Asn Tyr Thr
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Asn Arg Ser Gly Asp Ala Pro Leu Thr Val Asn Glu Leu Gly Thr Ala
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Tyr Val Ser Ala Thr Thr Gly Ala Val Ala Thr Ala Leu Gly Leu Asn
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                                    170
Ala Leu Thr Lys His Val Ser Pro Leu Ile Gly Arg Phe Val Pro Phe
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Ala Ala Val Ala Ala Ala Asn Cys Ile Asn Ile Pro Leu Met Arg Gln
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Arg Glu Leu Lys Val Gly Ile Pro Val Thr Asp Glu Asn Gly Asn Arg
                        215
                                            220
Leu Gly Glu Ser Ala Asn Ala Ala Lys Gln Ala Ile Thr Gln Val Val
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                                        235
Val Ser Arg Ile Leu Met Ala Ala Pro Gly Met Ala Ile Pro Pro Phe
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                                    250
Ile Met Asn Thr Leu Glu Lys Lys Ala Phe Leu Lys Arg Phe Pro Trp
           260
                                265
Met Ser Ala Pro Ile Gln Val Gly Leu Val Gly Phe Cys Leu Val Phe
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Ala Thr Pro Leu Cys Cys Ala Leu Phe Pro Gln Lys Ser Ser Met Ser
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Val Thr Ser Leu Glu Ala Glu Leu Gln Ala Lys Ile Gln Glu Ser His
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Leu Ser Arg Gly Asp Pro Leu Pro Val Lys Asp Arg Met Glu Met Pro
Val Ala Thr Gln Lys Thr Asp Thr Gly Leu Thr Gln Gly Leu Leu Lys
Val Leu His Lys Gln Cys His His Lys Arg Tyr Val Glu Leu Thr Asp
Leu Glu Gln Lys Trp Lys Asn Leu Cys Leu Pro Lys Glu Lys Phe Lys
Ala Leu Leu Gln Leu Asp Pro Cys Glu Asn Lys Ile Lys Trp Ile Asn
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115
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Glu Arg Ile Ala Leu Phe Leu Gln Asn Glu Glu Phe Met Lys Glu Leu
                            40
Gln Arg Asn Arg Asp Phe Leu Leu Ala Leu Glu Arg Asp Arg Leu Lys
                        55
                                            60
Tyr Glu Ser Gln Lys Ser Lys Ser Ser Ser Val Ala Val Gly Asn Asp
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Ser Pro Ile Cys Ile Ala Arg Glu Cys Ser Gly Pro Trp Gly Lys Gly
Leu Leu Pro Pro Glu Gly Thr Leu Leu Pro Arg Pro Leu Leu Gly Glu
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Leu Thr Gln Pro Thr Tyr Thr Gly Ala Ile Ile Ser Ile Cys Cys
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Leu Phe Ile Leu Phe Leu Phe Leu Ser Glu Leu Thr Gly Phe Ile Thr
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Gly Gly Lys Ile Asp Val Ser Leu Asn Ile Ser Leu Pro Asn Leu His
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Cys Glu Leu Val Gly Leu Asp Ile Gln Asp Glu Met Gly Arg His Glu
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Phe His Val Ser Thr His Ser Ala Thr Ala Gln Pro Gln Asn Pro Asp
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Met Thr His Val Ile His Lys Leu Ser Phe Gly Asp Thr Leu Gln Val
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				405					410					415	
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Glu	Arg	Ile 435		Ala	Leu	Lys	Asn 440	Glu	Leu	Arg	Lys	Glu 445	Arg	Glu	Gln
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			500					505			Lys		510		
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545					550					555	Val				560
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	-		580					585			Asn		590		
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				645					650		Cys			655	
			660					665			His		670		
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				725					730		Leu			735	
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	770					775					Glu 780				
785					790					795	Lys				800
				805					810		Cys			815	
			820					825			Gln		830		
7~~	Cvs	Glu	Ser	Ala	Leu	Gln	Ser	Leu	Glu	Gły	Arg	TYT	Arg	GID	GIU

Leu Lys Asp Leu Gln Glu Gln Gln Arg Glu Glu Lys Ser Gln Trp Glu Phe Glu Lys Asp Glu Leu Thr Gln Glu Cys Ala Glu Ala Gln Glu Leu Leu Lys Glu Thr Leu Lys Arg Glu Lys Thr Thr Ser Leu Val Leu Thr Gln Glu Arg Glu Met Leu Glu Lys Thr Tyr Lys Asp His Leu Asn Ser Met Val Val Glu Arg Gln Gln Leu Leu Gln Asp Leu Glu Asp Leu Arg Asn Val Ser Glu Thr Gln Gln Ser Leu Leu Ser Asp Gln Ile Leu Glu Leu Lys Ser Ser His Lys Arg Glu Leu Arg Glu Arg Glu Glu Val Leu Cys Gln Gln Gly Val Ser Glu Gln Leu Ala Ser Gln Arg Leu Glu Arg Leu Glu Met Glu His Asp Gln Glu Arg Gln Glu Met Met Ser Lys Leu Leu Ala Met Glu Asn Ile His Lys Ala Thr Cys Glu Thr Ala Asp Arg Glu Arg Ala Glu Met Ser Thr Glu Ile Ser Arg Leu Gln Ser Lys Ile Lys Glu Met Gln Gln Ala Thr Ser Pro Leu Ser Met Leu Gln Ser Gly Cys Gln Val Ile Gly Glu Glu Glu Val Glu Gly Asp Gly Ala Leu Ser Leu Leu Gln Lys Gly Glu Gln Leu Leu Glu Glu Asn Gly Asp Val Leu Leu Ser Leu Gln Arg Ala His Glu Gln Ala Val Lys Glu Asn Val Lys Met Ala Thr Glu Ile Ser Arg Leu Gln Gln Arg Leu Gln Lys Leu Glu Pro Gly Leu Val Met Ser Ser Cys Leu Asp Glu Pro Ala Thr Glu Phe Phe Gly Asn Thr Ala Glu Gln Thr Glu Pro Phe Leu Gln Gln Asn Arg Thr Lys Gln Val Glu Gly Val Thr Arg Arg His Val Leu Ser Asp Leu Glu Asp Asp Glu Val Arg Asp Leu Gly Ser Thr Gly Thr Ser Ser Val Gln Arg Gln Glu Val Lys Ile Glu Glu Ser Glu Ala Ser Val Glu Gly Phe Ser Glu Leu Glu Asn Ser Glu Glu Thr Arg Thr Glu Ser Trp Glu Leu Lys Asn His Ile Ser Leu Leu Gln Glu Gln Leu Met Met Phe Cys Ala Asp Cys Asp Leu Ala Ser Glu Lys Lys Gln Glu Leu Leu Phe Asp Val Ser Val Leu Lys Lys Leu Lys Ile Leu Glu Arg Ile Pro Glu Ala Ser Pro Arg Tyr Lys Leu Leu Tyr Glu Asp Val Ser Arg Glu Asn 1250 . 1255 Asp Cys Leu Gln Glu Glu Leu Glu Met Met Glu Thr Arg Tyr Asp Glu

1265	5				1270					1275					1280
				1285	5				1290)			Arg	1295	5
			1300)				1305	;				Leu 1310)	
	_	1315	5	_			1320)				1325			
	1330)				1335	;				1340)	Thr		
1345	5				1350)				1355	5		Leu		1360
				1365	5				1370)			Gln	1375	5
			1380)				1385	;				Ile 1390)	
		1395	5				1400)				1405			
	1410)				1415	5				1420)	Ile		
		Glu	Arg	Pro			Gln	Asn	Gln			Leu	Glu	Glu	Asn
1425		_	_		1430		_	•	•••	1435		174.0	C1=	212	1440
				1445	5				1450)			Gln	1455	5
			1460)		•		1469	5				Leu 1470)	
Lys	Leu	Lys 1475		Arg	Val	Pro	Ile 1480		Val	Lys	Gln	Lys 1485	Asp	Val	Leu
	1490	Gly	Lys			1495	Glu	Leu			1500)	His		
	1490	Gly	Lys			1495	Glu	Leu		Val	1500 Glu)			Tyr
Gln 1505	1490 Ile	Gly Pro	Lys Cys	Ser	Glu 1510	1499 Met	Glu Gln	Leu	Lys	Val	1500 Glu 5) Leu	Leu	Lys	Tyr 1520
Gln 1505 Glu	1490 Ile Ser	Gly Pro Glu	Lys Cys Lys	Ser Leu 152	Glu 1510 Gln	1495 Met O Gln	Glu Gln Glu	Leu Gln Asn	Lys Ser 1530	Val 1519 Ile	1500 Glu 5 Leu) Leu Arg	Leu Asn	Lys Glu 1535	Tyr 1520 Ile
Gln 1505 Glu Thr	1490 Ile Ser Thr	Gly Pro Glu Leu	Lys Cys Lys Asn 1540	Ser Leu 1529 Glu	Glu 1510 Gln Glu	1495 Met O Gln Asp	Glu Gln Glu Ser	Leu Gln Asn Ile 154	Lys Ser 1530 Ser	Val 1519 Ile O Asn	1500 Glu Glu Leu Leu	Leu Arg Lys	Leu Asn Leu 155	Lys Glu 1539 Gly	Tyr 1520 Ile Thr
Gln 1509 Glu Thr Leu	1490 Ile Ser Thr	Gly Pro Glu Leu Gly 1555	Lys Cys Lys Asn 1540 Ser	Ser Leu 152: Glu) Gln	Glu 1510 Gln Glu Glu	1495 Met) Gln Asp Glu	Glu Gln Glu Ser Met	Gln Asn Ile 1549 Trp	Lys Ser 1530 Ser Gln	Val 1519 Ile) Asn Lys	1500 Glu Leu Leu	Leu Arg Lys Glu 156	Leu Asn Leu 1550 Ser	Lys Glu 1535 Gly Val	Tyr 1520 Ile Thr Lys
Gln 1505 Glu Thr Leu Gln	1490 Ile Ser Thr Asn Glu 1570	Gly Pro Glu Leu Gly 1555 Asn	Lys Cys Lys Asn 1540 Ser Ala	Leu 1525 Glu Gln Ala	Glu 1510 Gln Glu Glu Val	Met Gln Asp Glu Leu 1575	Glu Gln Glu Ser Met 1560 Lys	Leu Gln Asn Ile 1549 Trp	Lys Ser 1530 Ser Gln Val	Val 1519 Ile Asn Lys Glu	1500 Glu Leu Leu Thr	Leu Arg Lys Glu 1569 Leu	Leu Asn Leu 1550 Ser Lys	Lys Glu 1535 Gly Val Lys	Tyr 1520 Ile Thr Lys
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Gln 1505 Glu Thr Leu Gln Ile 1585	1490 Ile Ser Thr Asn Glu 1570 Ser	Gly Pro Glu Leu Gly 1555 Asn Glu	Lys Cys Lys Asn 1540 Ser Ala Leu	Leu 1529 Glu Gln Ala Lys	Glu 1510 Gln Glu Glu Val Ile 1590	1499 Met Color Gln Asp Glu Leu 1579 Lys	Glu Gln Glu Ser Met 1560 Lys Asn	Leu Gln Asn Ile 1549 Trp Met	Lys Ser 1530 Ser Gln Val	Val 1519 Ile Asn Lys Glu Leu 1599	1500 Glu Leu Leu Thr Asn 1580 Asp	Leu Arg Lys Glu 1569 Leu Leu	Leu Asn Leu 1556 Ser Lys Glu	Lys Glu 1535 Gly Val Lys Asn	Tyr 1520 Ile 5 Thr Lys Gln Thr 1600
Gln 1505 Glu Thr Leu Gln Ile 1585 Glu	1490 Ile Ser Thr Asn Glu 1570 Ser	Gly Pro Glu Leu Gly 1555 Asn Glu Ser	Lys Cys Lys Asn 1540 Ser Ala Leu Gln	Leu 1529 Glu Gln Ala Lys Lys 1609	Glu 1510 Gln Glu Glu Val Ile 1590 Asn	Gln Asp Glu Leu 1575 Lys Ser	Glu Glu Ser Met 1560 Lys Asn Pro	Leu Gln Asn Ile 1549 Trp Met Gln Asn	Lys Ser 1530 Ser Gln Val Gln Gln 1610	Val 1519 Ile Asn Lys Glu Leu 1599 Glu	1500 Glu Leu Leu Thr Asn 1580 Asp	Leu Arg Lys Glu 156! Leu Leu Leu	Leu Asn Leu 1556 Ser Lys Glu Gln	Glu 1535 Gly Val Lys Asn Glu 1615	Tyr 1520 Ile Thr Lys Gln Thr 1600 Leu
Gln 1505 Glu Thr Leu Gln Ile 1585 Glu	1490 Ile Ser Thr Asn Glu 1570 Ser	Gly Pro Glu Leu Gly 1555 Asn Glu Ser	Lys Cys Lys Asn 1540 Ser Ala Leu Gln	Leu 1529 Glu Gln Ala Lys Lys 1609 Thr	Glu 1510 Gln Glu Glu Val Ile 1590 Asn	Gln Asp Glu Leu 1575 Lys Ser	Glu Glu Ser Met 1560 Lys Asn Pro	Leu Gln Asn Ile 1549 Trp Met Gln Asn	Lys Ser 1530 Ser Gln Val Gln Gln 1610	Val 1519 Ile Asn Lys Glu Leu 1599 Glu	1500 Glu Leu Leu Thr Asn 1580 Asp	Leu Arg Lys Glu 156! Leu Leu Leu	Leu Asn Leu 1556 Ser Lys Glu Gln	Glu 1535 Gly Val Lys Asn Glu 1615	Tyr 1520 Ile 5 Thr Lys Gln Thr 1600 Leu
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Gln 1505 Glu Thr Leu Gln Ile 1585 Glu Asn Asn	1490 Ile Ser Thr Asn Glu 1570 Ser Leu Gln Ser Pro 1650 Ala	Gly Pro Glu Leu Gly 1555 Asn Glu Ser Leu Ala 1633 Glu	Lys Cys Lys Asn 1540 Ser Ala Leu Gln Leu 1620 Leu Arg	Leu 1525 Glu Gln Ala Lys Lys 1605 Thr	Glu Glu Glu Val Ile 1590 Asn Glu Glu Lys	Gln Asp Glu Leu 1579 Lys Ser Met Arg Val 1659 Val	Glu Glu Ser Met 1560 Lys Asn Pro Leu Glu 1640 Gln	Leu Gln Asn Ile 1549 Trp Met Gln Asn Cys 1629 Gln Ser	Lys Ser 1530 Ser Gln Val Gln 1610 Gln 5 Glu Ser	Val 1519 Ile Asn Lys Glu 1599 Glu Lys Lys	Leu Thr Asn 1580 Asp Clus Clus Clus Clus Clus Clus Clus Clus	Leu Arg Lys Glu 1569 Leu Leu Lys Asn 1649 Val	Leu Asn Leu 1556 Ser Lys Glu Glu 1636 Leu 5	Lys Glu 1535 Gly Val Lys Asn Glu 1619 Pro Lys Ser	Tyr 1520 Ile 5 Thr Lys Gln Thr 1600 Leu 5 Gly Glu
Gln 1505 Glu Thr Leu Gln Ile 1585 Glu Asn Glu Glu 1665	1490 Ile Ser Thr Asn Glu 1570 Ser Leu Gln Ser Pro 1650 Ala	Gly Pro Glu Leu Gly 1555 Asn Glu Ser Leu Ala 1633 Glu Glu	Lys Cys Lys Asn 1540 Ser Ala Leu Gln Leu 1620 Leu Arg	Leu 1525 Glu Gln Ala Lys 1605 Thr Glu Cys	Glu 1510 Gln Glu Glu Val Ile 1590 Asn Glu Glu Lys Glu 1670 Gln	Gln Asp Glu Leu 1579 Lys Ser Met Arg Val 1659 Val	Glu Glu Ser Met 1560 Lys Asn Pro Leu Glu 1640 Gln Lys	Leu Gln Asn Ile 154! Trp Met Gln Asn Cys 162! Gln Ser	Lys Ser 1530 Ser Gln Val Gln 1610 Gln Gln Ser Glu Ser	Val 1519 Asn Lys Glu 1599 Glu Lys Lys Thr Thr 167 Lys	Leu Thr Asn 1580 Asp Lys Glu Phe Leu 1666 His	Leu Arg Lys Glu 1569 Leu Leu Lys Asn 1641 Val 0	Leu Asn Leu 1556 Ser 5 Lys Glu Glu 1630 Leu 5 Ser Val	Lys Glu 1535 Gly Val Lys Asn Glu 1615 Pro Lys Ser Gln	Tyr 1520 The Thr Lys Gln Thr 1600 Leu Gly Glu Leu Gln 1680 His

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Arg Ile	Ala Th	ır Met	Lys Glr	ı Glu	Gln	Lys	Ser	Trp	Glu	His	Gln	Ser
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Leu Glu	Asp Th	r Val	Gln Asr	val	Asn	Leu	Gln	Met	Ser	Ara	Met	Lvs
		80			178					179		-1-
Ser Asp	Pro Ar	g Val	Thr Glr	Gln	Glu	Lvs	Glu	Ala	Leu		-	Glu
	1795	•		180		-4-			180	_		
Val Met	Pro Le	u His	Lvs Glr			Asn	Ser	Val			Ser	Tro
181			181					182		-,-		
Ala Pro	Glu Il	e Ala			Ser	Glv	T.em		-	Gln	Gla	Lve
1825			1830			-	183			01	01	1840
Arg Leu	Ser Tr	n Asp		Asp	His	Leu			Glu	Glu	G) n	
		1845		···		1856			024	ULU	185	
Leu Leu	Tro Gl		-	Ara	Len			Met	Val	Gln		
	18	60	020	9	1869		****	Mec	Val	1870		1111
Lys Ala			His Ser	Ara			TeV	Δνα	Gln		•	Co=
	1875			1880		Lys	Val	ALG	1889		Gru	261
Asn Leu		O LVS	His Gla			Τ.Δ11) en	Pro			Th~	Mot
1890		O Lys	189		птэ	Den	Wall	1900		Gly	1111	Met
Asn Pro	_	u Gln			Sar	T.Au	Luc			Cres	700	C1=
1905			1910	neu	361	Deu	1919		GIU	Cys	Asp	1920
Phe Gln	Lvs Gl			Δla	Acn) ra			50-	Gla.	Mot	
02	3,0 01	1925		ALG	vair	1930	-	val	Ser	GIII	1935	
Ser Leu	Glu Gl			Thr	716			Gl v	λcn	C1		
502 504	19		Dea Ola		1945		Leu	Gru	ASII	1950	-	Leu
Lys Lys		-	Tue Len				Lou	Mor	G3.,			77 i -
ביים ביים	1955		Lys Lea	1960		GIII	Deu	MEC	1965		GIII	HIS
Leu Arg		י בוג י	Thr Dro			Ca*	Dro	uin			N ===	T
1970		· AIA .	197		PIO	Ser	PIO	1980		irp	ASP	Leu
Gln Leu		. Gl			Divo	Wo b	17-1			~1	a1 -	D 1-
1985	Dea GI		1990	Cys	PLO		vai 1995		Arg	GIU	GIN	
Leu Gln	Lau Gla			T	~1 -				+1 -	.	~ 1 -	2000
Dea Giii	Dea GI	2005	ern pen	Leu		2010		Arg	ire			
Leu Gln	Glu Glu		alu Aca	A				Th	B		2015	
Deu Gill	202		JIU ASII				GIU	ınr				GIn
Gly Asp					2025		a 1	~1		2030		
Gly Asn	2035	ı Giii i	Leu val			Mec	GIU				TTE	GIU
Val Cl.				2040			_		2045		_	
Val Glu	GIII Lys	s Leu I			rys .	Arg				Glu	Lys	Val
2050			2055					2060		_	_	_
Asn Gln	red ras			ser	· eu				Leu	Cys		•
2065	TI - C:		2070		_		2075		_	_		2080
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WO 00/58473

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Thr Gly Leu Tyr Glu Tyr Lys Val Phe Gly Val Leu Glu Asp Cys Ser
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Pro Thr Leu Leu Ala Asp Ile Tyr Met Asp Ser Asp Tyr Arg Lys Gln
Trp Asp Gln Tyr Val Lys Glu Leu Tyr Glu Gln Glu Cys Asn Gly Glu
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Thr Val Val Tyr Trp Glu Val Lys Tyr Pro Phe Pro Met Ser Asn Arg
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Asp Tyr Val Tyr Leu Arg Gln Arg Arg Asp Leu Asp Met Glu Gly Arg
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Lys Ile His Val Ile Leu Ala Arg Ser Thr Ser Met Pro Gln Leu Gly
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                                          140
Glu Arg Ser Gly Val Ile Arg Val Lys Gln Tyr Lys Gln Ser Leu Ala
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Ile Glu Ser Asp Gly Lys Lys Gly Ser Lys Val Phe Met Tyr Tyr Phe
                                  170
Asp Asn Pro Gly Gly Gln Ile Pro Ser Trp Leu Ile Asn Trp Ala Ala
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Lys Leu Arg Gly Met Asp Glu Val Tyr Asn Leu Phe Tyr Val Asn Asn
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Asn Trp Tyr Ile Phe Met Arg Leu His Gln Ile Leu Cys Leu Arg Leu
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Lys Thr Gly Gly Gln Gly Ser Asp Ala Thr Leu Leu Phe Val Lys Tyr
Gly Thr Thr Phe Phe Val Leu Phe Glu Val Ser Ser Gly Ser Lys Leu
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Ser Gly Ser Thr Gly Met Pro Lys Gly Ile Val His Thr Gln Ala Gly
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Tyr Gly Gln Thr His Tyr Tyr His Gln Arg Gln Asn Ser Asp Asp Lys
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Leu Asn Gly Trp Gln Asn Ser Arg Asp Ser Gly Ile Cys Ile Asn Ala
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Glu Glu Asn Ile Ser Ser Tyr Leu Gln Leu Ile Asp Lys Cys Leu Ile
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Gln Gln Val Gln Lys Leu Phe Arg Ser Phe Pro Arg Lys Thr Leu Leu
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Met Leu Met Phe Gln Gln Pro Glu Phe Gln Leu Pro Val Thr Glu Pro
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<213> Homo sapiens

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Val Ser Val Thr Tyr Gly Ile Trp Ile Cys Leu Glu Cys Ser Gly Arg
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His Arg Gly Leu Gly Val His Leu Ser Phe Val Arg Ser Val Thr Met
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Asp Lys Trp Lys Asp Ile Glu Leu Glu Lys Met Lys Ala Gly Gly Asn
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Ala Lys Phe Arg Glu Phe Leu Glu Ser Gln Glu Asp Tyr Asp Pro Cys
Trp Ser Leu Gln Glu Lys Tyr Asn Ser Arg Ala Ala Ala Leu Phe Arg
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Asp Lys Val Val Ala Leu Ala Glu Gly Arg Glu Trp Ser Leu Glu Ser
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Ser Pro Ala Gln Asn Trp Thr Pro Pro Gln Pro Arg Thr Leu Pro Ser
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Met Val His Arg
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 Glu Ala Gly Gln Ser Asn Ile Ala Pro Gln Pro Val Gly Tyr Ala Ala
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Gly Leu Lys Gly Ala Gln Glu Arg Ile Asp Ser Leu Arg Arg Thr Gly
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Val Ile His Glu Lys Gln Thr Ala Val Ser Val Glu Asn Phe Ile Ala
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Glu Leu Leu Pro Asp Lys Trp Phe Asp Ile Gly Cys Leu Val Val Glu
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Asp Pro Val His Gly Ile His Leu Glu Thr Phe Thr Gln Ala Thr Pro
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Val Pro Leu Glu Phe Val Gln Gln Ala Gln Ser Leu Thr Pro Gln Asp
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Tyr Asn Leu Arg Trp Ser Gly Leu Leu Val Thr Val Gly Glu Val Leu
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Glu Lys Ser Leu Leu Asn Val Ser Arg Thr Asp Trp His Met Ala Phe
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Gln Asn Gln Gln Asn Gly Gln Arg Val Tyr Thr Ser Met Ser Asp Cys
Leu Ile Lys Thr Val Arg Ser Glu Gly Tyr Phe Gly Met Tyr Arg Gly
Ala Ala Val Asn Leu Thr Leu Val Thr Pro Glu Lys Ala Ile Lys Leu
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                                        75
Ala Ala Asn Asp Phe Phe Arg His Gln Leu Ser Lys Asp Gly Gln Lys
Leu Thr Leu Leu Lys Glu Met Leu Ala Gly Cys Gly Ala Gly Thr Cys
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1320
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Ala Ser Gly Phe Asp Ser Glu Ser Glu Ser Glu Ser Glu Asn Ser Pro
Gln Ala Glu Thr Arg Glu Ala Arg Glu Ala Ala Arg Ser Pro Asp Lys
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Pro Gly Gly Ser Pro Ser Ala Ser Arg Arg Lys Gly Arg Ala Ser Glu
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His Lys Asp Gln Leu Ser Arg Leu Lys Asp Arg Asp Pro Glu Phe Tyr
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                                105
                                                     110
Lys Phe Leu Gln Glu Asn Asp Gln Ser Leu Leu Asn Phe Ser Asp Ser
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Asp Ser Ser Glu Glu Glu Glu Pro Phe His Ser Leu Pro Asp Val
Leu Glu Glu Ala Ser Glu Glu Glu Asp Gly Ala Glu Glu Gly Glu Asp
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                                                             160
Gly Asp Arg Val Pro Arg Gly Leu Lys Gly Lys Lys Asn Ser Val Pro
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Val Thr Val Ala Met Val Glu Arg Trp Lys Gln Ala Ala Lys Gln Arg
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Val	Ala 210	Thr	Thr	Arg	Gly	Asp 215		Glu	Ser	Ala	Glu 220	Ala	Asn	Lys	Phe
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Arg				245	Cys				250					255	
			260		Met			265					270		
		275			Ile		280					285			
	290				Glu	295					300				
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				325	Met				330					335	
			340		Phe			345					350		
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			420		Thr			425					430		
	_	435			Glu		440					445			
	450					455					460				Tyr
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		595					600					605			Asn
Ser	Ala	Tyr	ire	cys	ser	arg	Arg	GIN	Arg	A est T	ser	FIIC	OLY	407	Ser

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 Glu Ile Gln Leu Glu Ile Ser Gly Lys Glu Arg Val Arg Leu Gly Glu
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 Gly Thr Trp Leu Glu Asp Leu Asn Phe Pro Glu Ile Lys Arg Arg Lys
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 Met Ala Asp Arg Lys Asp Glu Asp Arg Lys Gln Phe Lys Asp Leu Phe
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 Asp Leu Asn Ser Ser Glu Glu Asp Asp Thr Glu Gly Phe Leu Glu Arg
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Gly Ile Leu Gly Pro Leu Ser Thr Arg His Gly Val Glu Asp Asp Glu
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Glu Asp Glu Glu Glu Glu Glu Asp Ser Ser Asn Ser Glu Gly Glu
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Trp Ser Trp Asp Gly Asp Pro Asp Ala Glu Ala Gly Leu Ala Pro Gly
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 Gln Ala His Arg Lys Glu Leu Glu Gly Leu Arg Met Arg Ala Ser Asn
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<213> Homo sapiens

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Met Ala Ser Ala Ala Arg Glu Leu Val Ile Gln Arg Leu Ser Leu Val
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Arg Ser Leu Cys Glu Ser Glu Glu Gln Arg Leu Leu Glu Gln Val His
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Gly Glu Glu Glu Arg Ala His Gln Ser Ile Leu Thr Gln Arg Val His
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Trp Ala Glu Ala Leu Gln Lys Leu Asp Thr Ile Arg Thr Gly Leu Val
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Gly Met Leu Thr His Leu Asp Asp Leu Gln Leu Ile Gln Lys Glu Gln
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Glu Ile Phe Glu Arg Thr Glu Glu Ala Glu Gly Ile Leu Asp Pro Gln
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                    150
Glu Ser Glu Met Leu Asn Phe Asn Glu Lys Cys Thr Arg Ser Pro Leu
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Leu Thr Gln Leu Trp Ala Thr Ala Val Leu Gly Ser Leu Ser Gly Thr
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Glu Asp Ile Arg Ile Asp Glu Arg Thr Val Ser Pro Phe Leu Gln Leu
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Ser Asp Asp Arg Lys Thr Leu Thr Ser Ala Pro Arg Ser Gln Arg Cys
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Ala Asp Gly Pro Glu Arg Phe Asp His Trp Pro Asn Ala Leu Ala Ala
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Thr Ser Phe Gln Asn Gly Leu His Ala Trp Met Val Asn Val Gln Asn
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                                    250
Ser Cys Ala Tyr Lys Val Gly Val Ala Ser Gly His Leu Pro Arg Lys
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Gly Ser Gly Ser Asp Cys Arg Leu Gly His Asn Ala Phe Ser Trp Val
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<212> DNA

<213> Homo sapiens

<400> 2739

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Ile Ile Ser Gly Val Val Ser Leu Phe Ile Phe Gly Phe Cys Trp Leu
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Ser Pro Ala Leu Gln Asp Leu Gln Ala Thr Glu Ala Asn Cys Thr Val
Leu Ser Val Gln Gln Ile Gly Glu Val Phe Glu Cys Thr Phe Thr Cys
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Gly Ala Asp Cys Arg Gly Thr Ser Gln Tyr Pro Cys Val Gln Val Tyr
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Val Asn Asn Ser Glu Ser Asn Ser Arg Ala Leu Leu His Ser Asp Glu
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His Gln Leu Leu Thr Asn Pro Lys Cys Ser Tyr Ile Pro Pro Cys Lys
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Arg Glu Asn Gln Lys Asn Leu Glu Ser Val Met Asn Trp Gln Gln Tyr
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Trp Lys Asp Glu Ile Gly Ser Gln Pro Phe Thr Cys Tyr Phe Asn Gln
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His Gln Arg Pro Asp Asp Val Leu Leu His Arg Thr His Asp Glu Ile
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Val Leu Leu His Cys Phe Leu Trp Pro Leu Val Thr Phe Val Val Gly
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Tyr Arg Asp Asp Leu Asp Leu Gln Asn Leu Ile Asp Phe Gly Gln Lys
Lys Phe Ser Cys Cys Gly Gly Ile Ser Tyr Lys Asp Trp Ser Gln Asn
Met Tyr Phe Asn Cys Ser Glu Asp Asn Pro Ser Arg Glu Arg Cys Ser
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Val Pro Tyr Ser Cys Cys Leu Pro Thr Pro Asp Gln Ala Val Ile Asn
                   70
Thr Met Cys Gly Gln Gly Met Gln Ala Phe Asp Tyr Leu Glu Ala Ser
Lys Val Ile Tyr Thr Asn Gly Cys Ile Asp Lys Leu Val Asn Trp Ile
           100
His Ser Asn Leu Phe Leu Leu Gly Gly Val Ala Leu Gly Leu Ala Ile
                            120
                                                125
Pro Gln Leu Val Gly Ile Leu Leu Ser Gln Ile Leu Val Asn Gln Ile
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Pro Trp Tyr
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Gln Ser Pro Pro Gly Ala Ser Arg Asp Trp Ser Val Pro Ser Pro Pro
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Ser Gly Glu Lys Leu Pro Asp Gln Pro Phe Thr His His Ser Gln Glu
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Gly Pro Phe Pro Pro Gly Arg Glu Thr Ser Arg Pro Ala Pro His Thr
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Thr Ala Lys Arg Gly Leu Ser His Leu Glu Arg Asn Phe Gln Thr Ser
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Pro Ser His His Ser Gln Glu Gly Pro Phe Pro Pro Gly Glu Lys Leu
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                           40
Gly Cys Phe Ala Cys Val Ser Lys Pro Pro Ala Leu Gln Ala Pro Ala
                                          60
Ala Pro Ala Pro Glu Pro Ser Ala Ser Pro Pro Met Ala Pro Thr Leu
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                   70
Phe Pro Met Glu Ser Lys Ser Ser Lys Thr Asp Ser Val Arg Ala Ala
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               85
Gly Ala Pro Pro Ala Cys Lys His Leu Ala Glu Lys Lys Thr Met Thr
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 Asp Tyr Tyr Leu Trp Ser Ile Phe Asn Phe Val Tyr Leu Asn Phe Cys
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 Cys Leu Gly Phe Ile Ala Leu Ala Tyr Ser Leu Lys Val Arg Asp Lys
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 Lys Leu Leu Asn Asp Leu Asn Gly Ala Val Glu Asp Ala Lys Thr Ala
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 Arg Leu Phe Asn Ile Thr Ser Ser Ala Leu Ala Ala Ser Cys Ile Ile
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Ile Cys Thr Arg Thr Val Gln His Gln Asp Ser Gln Val Asn Ala Leu
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Glu Val Thr Pro Asp Arg Ser Met Ile Ala Ala Ala Val Gln Pro Val
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Ser Leu Gly Tyr Gln His Ile Arg Met Tyr Asp Leu Asn Ser Asn Asn
Pro Asn Pro Ile Ile Ser Tyr Asp Gly Val Asn Lys Asn Ile Ala Ser
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 Asn Gln Ala Glu Leu Ile Val Gly Asp Gln Ser Gly Ala Ile His Ile
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 Trp Asp Leu Lys Thr Asp His Asn Glu Gln Leu Ile Pro Glu Pro Glu
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 Ile Gly Asp Glu Val Thr Gln Leu Ile Pro Lys Thr Lys Ile Pro Ala
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His Thr Arg Tyr Ala Leu Gln Cys Arg Phe Ser Pro Asp Ser Thr Leu
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                                         235
Leu Ala Thr Cys Ser Ala Asp Gln Thr Cys Lys Ile Trp Arg Thr Ser
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Asn Phe Ser Leu Met Thr Glu Leu Ser Ile Lys Ser Gly Asn Pro Gly
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Glu Ser Ser Arg Gly Trp Met Trp Gly Cys Ala Phe Ser Gly Asp Ser
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Gln Tyr Ile Val Thr Ala Ser Ser Asp Asn Leu Ala Arg Leu Trp Cys
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 Pro Pro Pro Thr Thr Arg Thr Val Ala Ser Ser Gly Thr His Thr Ser
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Arg Val Thr Lys Cys Ile Leu Tyr Cys Phe Tyr Lys Asn Val Val Leu
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Val His Ser Leu Ile Leu Phe Trp Phe Pro Met Lys Ala Leu Glu His
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Arg Asp Arg Leu Ile Lys Arg Leu Gly Arg Lys Thr Pro Pro Thr Leu
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Ala Lys Glu Asn Leu Lys Lys Ile Gln Glu Met Glu Lys Ser Asp Glu
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Ser Ser Thr Asp Leu Glu Glu Leu Lys Asn Ala Asp Trp Ala Arg Phe
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Trp Val Gln Val Met Arg Asp Leu Arg Asn Gly Val Lys Leu Lys Lys
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Val Gln Glu Arg Gln Tyr Asn Pro Leu Pro Ile Glu Tyr Gln Leu Thr
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Pro Tyr Glu Met Leu Met Asp Asp Ile Arg Cys Lys Arg Tyr Thr Leu
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Arg Lys Val Met Val Asn Gly Asp Ile Pro Pro Arg Leu Lys Lys Ser
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Ala His Glu Ile Ile Leu Asp Phe Ile Arg Ser Arg Pro Pro Leu Asn
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Pro Val Ser Ala Arg Lys Leu Lys Pro Thr Pro Pro Arg Pro Arg Ser
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Leu His Glu Arg Ile Leu Glu Glu Ile Lys Ala Glu Arg Lys Leu Arg
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Pro Val Ser Pro Glu Glu Ile Arg Arg Ser Arg Leu Asp Val Thr Thr
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Pro Glu Ser Thr Lys Asn Leu Val Glu Ser Ser Met Val Asn Gly Gly
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Leu Thr Ser Gln Thr Lys Glu Asn Gly Leu Ser Thr Ser Gln Gln Val
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Pro Ala Gln Arg Lys Lys Leu Leu Arg Ala Pro Thr Leu Ala Glu Leu
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Ser Ser Val Ser Pro Ser Phe Pro Glu Glu Pro Val Leu Glu Ala Val
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Ser Arg Ser Leu Glu Glu Phe Cys Tyr Pro Val Glu Cys Leu Ala Leu
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Leu Glu Lys Tyr Gln Gln Tyr Lys Asp Ile Tyr Thr Ala Leu Lys Lys
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Gly Lys Leu Cys Phe Cys Cys Arg Thr Arg Arg Phe Ser Phe Phe Thr
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Trp Ser Tyr Thr Cys Gln Phe Cys Lys Arg Pro Val Cys Ser Gln Cys
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Cys Lys Lys Met Arg Leu Pro Ser Lys Pro Tyr Ser Thr Leu Pro Ile
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 Val Asp Cys Lys Lys Phe Ile Ser Glu Ile Ile Ser Ser Ser Arg Arg
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Cys Gly Arg Tyr Ile Glu Glu His Ala Leu Lys His Phe Gln Glu Ser
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Arg Gln Gln Ala Pro Gly Pro Gln Gln Ala Pro Gly Pro Arg Gln Pro
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Lys Ser Glu Val Gln Leu Trp Leu Leu Lys Arg Ile Gln Val Pro Ile
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Glu Asp Ile Leu Pro Ser Lys Glu Glu Lys Ser Lys Thr Pro Pro Met
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Phe Leu Cys Ile Lys Val Gly Lys Pro Met Arg Lys Ser Phe Ala Thr
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His Thr Ala Ala Met Val Gln Gln Tyr Gly Lys Arg Arg Lys Gln Pro
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Glu Tyr Trp Phe Ala Val Pro Arg Glu Arg Val Asp His Leu Tyr Thr
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Phe Phe Val Gln Trp Ser Pro Asp Val Tyr Gly Lys Asp Ala Lys Glu
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Gln Gly Phe Val Val Val Glu Lys Glu Glu Leu Asn Met Ile Asp Asn
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Glu Glu Val Leu Pro Val Leu Arg Pro Pro Arg Ala Phe Trp Glu Asn
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Lys Pro Leu Asn Arg Trp Ala Arg Pro Phe Pro Ala Arg Val Gln Gly
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Tyr Pro Trp Arg Leu Ala Tyr Ser Thr Leu Glu His Gly Thr Ser Leu
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Val Ala Ser Gly Pro Val Val Gly Gly Arg Lys Lys Val Arg Gly Pro
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Glu Gln Ile Lys Gln Glu Val Glu Ser Glu Glu Glu Lys Pro Asp Arg
                        55
Met Asp Ile Asp Ser Glu Asp Thr Asp Ser Asn Thr Ser Leu Gln Thr
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Arg Ala Arg Glu Lys Arg Lys Pro Gln Leu Glu Lys Asp Thr Lys Pro
Lys Glu Pro Arg Tyr Thr Pro Val Ser Ile Tyr Glu Glu Lys Leu Leu
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Leu Lys Arg Leu Glu Ala Cys Pro Gly Ala Val Ala Met Thr Pro Glu
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Ala Arg Arg Leu Lys Arg Lys Leu Ile Val Arg Gln Ala Lys Arg Asp
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                                            140
Arg Gly Leu Pro Leu Phe Asp Leu Asp Gln Val Val Asn Ala Ala Leu
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                   150
Leu Leu Val Asp Gly Ile Tyr Gly Ala Lys Glu Gly Gly Ile Ser Arg
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Leu Pro Ala Gly Gln Ala Thr Tyr Arg Thr Thr Cys Gln Asp Phe Arg
                                185
Ile Leu Asp Arg Tyr Gln Thr Ser Leu Pro Ser Arg Lys Gly Phe Arg
                            200
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His Gln Thr Thr Lys Phe Leu Tyr Arg Leu Val Gly Ser Glu Asp Met
                                            220
                        215
Ala Val Asp Gln Ser Ile Val Ser Pro Tyr Thr Ser Arg Ile Leu Lys
                                        235
                   230
Pro Tyr Ile Arg Arg Asp Tyr Glu Thr Lys Pro Pro Lys Leu Gln Leu
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                245
Leu Ser Gln Ile Arg Ser His Leu His Arg Ser Asp Pro His Trp Thr
                                                    270
                                265
            260
Pro Glu Pro Asp Ala Pro Leu Asp Tyr Cys Tyr Val Arg Pro Asn His
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                            280
Ile Pro Thr Ile Asn Ser Met Cys Gln Glu Phe Phe Trp Pro Gly Ile
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Asp Leu Ser Glu Cys Leu Gln Tyr Pro Asp Phe Ser Val Val Leu
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                    310
Tyr Lys Lys Val Ile Ile Ala Phe Gly Phe Met Val Pro Asp Val Lys
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325
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 Tyr Asn Glu Ala Tyr Ile Ser Phe Leu Phe Val His Pro Glu Trp Arg
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 Arg Ala Gly Ile Ala Thr Phe Met Ile Tyr His Leu Ile Gln Thr Cys
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                            360
 Met Gly Lys Asp Val Thr Leu His Val Ser Ala Ser Asn Pro Ala Met
                        375
                                           380
 Leu Leu Tyr Gln Lys Phe Gly Phe Lys Thr Glu Glu Tyr Val Leu Asp
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 Phe Tyr Asp Lys Tyr Tyr Pro Leu Glu Ser Thr Glu Cys Lys His Ala
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                                    410
 Phe Phe Leu Arg Leu Arg Arg
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ggcacagttg cagteggcct gcaggtcaag gtcacagegg geggccageg ccccatecae
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                           40
Ser Leu Pro Ser Trp Arg Ser Ala Ala Pro Leu Ala Trp Pro Leu Gln
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Leu Ser Gly Gln Trp Trp Ser Ala Gly Ala Cys Phe Leu Asp Leu Pro
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Ser Leu Ala Leu Cys Trp Pro Gly Asp Ser Gly Asp Ala Glu Trp Pro
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Glu Ala Gly Ser
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gactcagcct acgacagcaa cgaccctgat gtggaatcca acagcagcag tggcatcagc
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 Ser Leu Ala Gln Pro Asp Arg Arg Tyr Ser Glu Pro Ser Met Pro Ser
                             40
 Ser Gln Glu Cys Leu Glu Ser Arg Val Thr Asn Gln Thr Leu Thr Lys
                         55
 Ser Glu Gly Asp Phe Pro Val Pro Arg Val Gly Ser Arg Leu Glu Ser
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                                         75
 Glu Glu Ala Glu Asp Pro Phe Pro Glu Glu Val Phe Pro Ala Val Gln
 Gly Lys Thr Lys Arg Pro Val Asp Leu Lys Ile Lys Asn Leu Ala Pro
 Gly Ser Val Leu Pro Arg Ala Leu Val Leu Lys Ala Phe Ser Ser Ser
         115
                             120
 Ser Leu Asp Ala Ser Ser Asp Ser Ser Pro Val Ala Ser Pro Ser Ser
                        135
 Pro Lys Arg Asn Phe Phe Ser Arg His Gln Ser Phe Thr Thr Lys Thr
                    150
                                         155
Glu Lys Gly Lys Pro Ser Arg Glu Ile Lys Lys His Ser Met Ser Phe
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Thr Phe Ala Pro His Lys Lys Val Leu Thr Lys Asn Leu Ser Ala Gly
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Ser Gly Lys Ser Gln Asp Phe Thr Arg Asp His Val Pro Arg Gly Val
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                            200
Arg Lys Glu Ser Gln Leu Ala Gly Arg Ile Val Gln Glu Asn Gly Cys
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                                             220
Glu Thr His Asn Gln Thr Ala Arg Gly Phe Cys Leu Arg Pro His Ala
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                                        235
Leu Ser Val Asp Asp Val Phe Gln Gly Ala Asp Trp Glu Arg Pro Gly
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Ser Pro Pro Ser Tyr Glu Glu Ala Met Gln Gly Pro Ala Ala Arg Leu
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Val Ala Ser Gln Gln Phe Gln Phe Leu Ala
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Asn Arg Ile Arg Val Arg Gln Asp Leu Ala Ser Leu Pro Ala Glu Leu
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 Ile Asn Gln Ile Gly Asn Arg Cys His Pro Lys Leu Tyr Asp Glu Gly
 Asp Pro Ser Glu Lys Leu Glu Leu Val Thr Gly Thr Asn Val Tyr Ile
 Thr Arg Ala Gln Leu Met Asn Cys His Val Ser Ala Gly Thr Arg His
 Lys Val Leu Leu Arg Arg Leu Leu Ala Ser Phe Phe Asp Arg Asn Thr
                                  105
 Leu Ala Asn Ser Cys Gly Thr Gly Ile Arg Ser Ser Thr Asn Asp Pro
                             120
                                                  125
 Arg Arg Lys Pro Leu Asp Ser Arg Val Leu His Ala Val Lys Tyr Tyr
                         135
 Cys Gln Asn Phe Ala Pro Asn Phe Lys Glu Ser Glu Met Asn Ala Ile
                     150
                                         155
 Ala Ala Asp Met Cys Thr Asn Ala Arg Arg Val Val Arg Lys Ser Trp
                                     170
 Met Pro Lys Val Lys Val Leu Lys Ala Glu Asp Asp Ala Tyr Thr Thr
 Phe Ile Ser Glu Thr Gly Lys Ile Glu Pro Asp Met Met Gly Val Glu
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His Gly Phe Glu Thr Ala Ser His Glu Gly Glu Ala Gly Pro Ile Ala
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Glu Ala Leu Gln
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Thr Thr Leu Gly Thr Leu Arg Lys Phe Pro Gly Ser Lys Leu Ala Glu
Met Phe Ser Ser Leu Ala Lys Ala Ser Thr Asp Ala Glu Gly Arg Phe
                    70
                                        75
Phe Ile Asp Arg Pro Ser Thr Tyr Phe Arg Pro Ile Leu Asp Tyr Leu
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                                    90
Arg Thr Gly Gln Val Pro Thr Gln His Ile Pro Glu Val Tyr Arg Glu
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 Ala Gln Phe Tyr Glu Ile Lys Pro Leu Val Lys Leu Leu Glu Asp Met
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 Pro Gln Ile Phe Gly Glu Gln Val Ser Arg Lys Gln Phe Leu Leu Gln
                         135
 Val Pro Gly Tyr Ser Glu Asn Leu Glu Leu Met Val Arg Leu Ala Arg
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                                          155
 Ala Glu Ala Ile Thr Ala Arg Lys Ser Ser Val Leu Val Cys Leu Val
                 165
                                     170
 Glu Thr Glu Glu Gln Asp Ala Tyr Tyr Ser Glu Val Leu Cys Phe Leu
                                 185
 Gln Asp Lys Lys Met Phe Lys Ser Val Val Lys Phe Gly Pro Trp Lys
                             200
 Ala Val Leu Asp Asn Ser Asp Leu Met His Cys Leu Glu Met Asp Ile
                         215
 Lys Ala Gln Gly Tyr Lys Val Phe Ser Lys Phe Tyr Leu Thr Tyr Pro
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 Thr Lys Arg Asn Glu Phe His Phe Asn Ile Tyr Ser Phe Thr Phe Thr
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<210> 2774
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Glu Asp Ala Glu Glu Ser Leu Glu Glu Glu Glu Ala Leu Asp Pro Leu
Gly Ile Met Arg Ser Lys Lys Pro Lys Lys His Pro Lys Val Ala Val
Lys Ala Lys Pro Ser Pro Arg Leu Thr Ile Phe Asp Glu Glu Val Asp
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Pro Asp Glu Gly Leu Phe Gly Pro Gly Arg Lys Leu Ser Pro Gln Asp
                                    90
Pro Ser Glu Asp Val Ser Ser Met Asp Pro Leu Lys Leu Phe Asp Asp
           100
                                105
Pro Asp Leu Gly Gly Ala Ile Pro Leu Gly Asp Ser Leu Leu Pro
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Ala Ala Cys Glu Ser Gly Gly Pro Thr Pro Ser Leu Ser His Arg Asp
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Ala Ser Lys Glu Leu Phe Arg Gln Ile Gln Lys Glu Pro
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Ser Lys Ser Lys 705 Lys Ile Gly Ser Glu 785 Arg	Glu Cys Phe Asp Val 690 Ser Asn Leu Glu His 770 Leu Arg	Tyr Ile Glu 675 Tyr Leu Pro Ala Ala 755 Asp Leu Ser	Thr Leu 660 Gln Cys Thr Glu Pro 740 Ser Gln Glu Lys	Glu 645 Gln Val Gln Gly Arg 725 Ile Gln Arg Thr	630 Met Ile Phe Cys Phe 710 Pro Lys Lys Trp Cys 790 Ser	Leu Val Tyr Arg 695 Gly Ser Asp Tyr Leu 775 Val	Asp Pro Ile 680 Arg Pro Pro Lys Asn 760 Leu Val	Asn Cys 665 Gln Pro Ala Ile Gln 745 Val Ala Asn Lys	Leu 650 Gln Tyr Leu Ala Gln 730 Thr Leu Ser Ile 810	635 Pro Tyr Leu Pro Ser 715 Leu Glu Phe Cys Ala 795 Gly	Leu Glu Met Lys Thr 700 Ile Tyr Leu Val Thr 780 Leu Leu	His Leu Ser 685 Gln Glu Ser Gly 765 Asp Pro Gln	Met Gln 670 Met Ile Met Pro Glu 750 Tyr Leu Asn Lys	Arg 655 Thr Ala His Thr Pro 735 Thr Cys His Arg Leu 815	640 Asn Met Phe Ile 120 Phe Phe Leu Gly Ser 800 Trp

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